# A STUDY ON SYNERGISTIC GAIN TO THE ACQUIRER AND ACQUIRING FIRMS- EVIDENCE FROM INDIAN PHARMACEUTICAL INDUSTRY

THESIS

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By

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# CIRTIFICATE

This is to certify that Ph.D. thesis entitled **"A Study on Synergistic Gain to the Acquirer and Acquiring Firms- Evidence from Indian Pharmaceutical Industry"** is of original work carried out by **Mr. Akeelurrehman** under my guidance and supervision for the award of Doctor of Philosophy (Ph.D.). He fulfilled all the statutory requirements for the submission of the thesis.

The work is being submitted for the first time in the department of commerce, A.M.U. for evaluation.

I wish him a very good luck for bright future.

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# *Dedication*

*To my beloved parents*

*&*

*My beloved wife & Kids*

*Mrs Nigar Akhtar*

*Adeel & Ammar*

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## Preface

This study presents a research in the field of business strategy and focussing on the strategy of M&A. Being most widely used corporate growth strategy the M&A can be employed to achieve rapid and inorganic fast growth, add on or cultivate core competencies in the related or unrelated business domains, gain greater completive advantage, incremental cash flows, market shares, new technologies, penetrate into new markets. All M&A activities are undertaken by the business firms have some implicit as well as explicit objectives and the success or failure of any M&A is attributed to the achieving and not achieving these objectives. There are number of past research conducted to evaluate the success rate of M&A concluded that the rate of success of M&A Sirower (1997) indicates that on average the success rate of M&A almost fifty percent

Comprehending the causes and factors of synergy value creation or value loss is therefore, indeed crucial to understanding the causes of success and failure of corporate acquisitions which in turn is crucial to managing them effectively.

The entire work is divided into six chapters. The first chapter presents an overview of past studies conducted on same and similar theme. The first part of the chapter one tries to comprehend the research paradigm in the vary field of M&A, subsequently, empirical evidence on different theories of M&A and the motives behind to undertake it by corporate firms has been discussed.

Since synergistic gain in M&A is the core issue which has to be addressed in this study, therefore, later part of chapter one is devoted to the literature review on the synergy gain in M&A and by making an in-depth extensive literature survey researcher has found that synergy gain is one of the most important motive in M&A.

The chapter two is devoted to understand the cases of M&A in Indian context. The cases of M&A in corporate firms got momentum in India after the second economic reforms which took place in 1991.

Though before 1991 there were no much cases of M&A found in India but after reforms the M&A undertaken by Indian firms increases very fast. According to Mckinsey data, the M&A activity increased by approximately 110% in 2000 with respect to the previous year. Owing to fast industrial reforms in India particularly post 2001 not only M&A deals could get accelerated internally but Indian firms have also gone global. According to Grant Thornton Deal Tracker annual issue, 2011 inbound deals in India dominated till 2006. but the number of outbound deals have outnumbered inbound deals since then some of major outbound deals, TATA Steel vs Corus, Dr Reddy vs Beta Pharma, etc.

All possible research dimensions of M&A in Indian have been analysed and discussed in the subsequent part of this chapter.

The chapter three again narrow down the discussion on M&A .This chapter is devoted to making an overview of Indian Pharmaceutical Industry. The features of all major Indian Pharmaceutical companies have been discussed in this chapter.

Chapter four of this study is devoted to discuss the research framework and methodologies of research. An integrative research methodology has been adopted in this study.

The chapter five is devoted to the analysis and following chapter six is devoted to research findings, limitation and future research scope.

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# Chapter-1

## Literature Review

### Introduction:

Sirower (1997) "Two of the great economic phenomena of the end of the twentieth century are the bull market in stocks and the great national and international consolidation that has taken place in a wide variety of industries. While the collapse of communism, computer technology, and the Fed's easy money policy have been major contributors, the massive mergers and acquisitions movement has played a very direct role in both the bull market and this process of consolidation and economic development. Indeed, in each of the last several years, we have set new records for the largest single merger, the total number of mergers per year, and the total value of mergers".

Mark Saunders ,Philip Lewis and Andrial Thornhill (2009) are of the view that there are two main reasons for conducting a review of relevant literature; the first is to generate and refine the research ideas and the second is to demonstrate the researcher's awareness of the current state of knowledge of the subject and its limitations.

In view of the above the literature review is conducted aiming at making in-depth understanding of the underlying concept and methodologies of research.

A considerable amount of both theoretical and empirical literature devoted to the study of M&A. The empirical literature has provided many important insights about the causes, motives characteristics of Firms, short-term market reactions to announcement of deal, long-term post deal performance of the combined firm, HR & cultural issues and process of M&A.

The global economy has witnessed an unprecedented amount of M&As often defined as 'complex, diverse and multiple causation' of an organizations business strategy, shaping market structure (Trautwein, 1990). What causes M&A at micro level? This is an issue that still remains partially unanswered. What drives M&A and what determine their performance? These are the fundamental questions in related to corporate strategy and finance literature on M&A. The M&A is neither a science nor an art rather a process and vital part of any healthy economy. There is no more complicated transaction than M&A. The issues involved in these deals include Valuation of Target. Deal Structure. Management of HR in post Acquisition. Tax & Securities Laws and Financing of deal. It seems that virtually every executive of every major industry faces a buy or sell decision at some point during his or her tenure as leader of the company. Andrew J. Sherman Milledge A. Hart(2006 ) in fact, it is estimated that some executives spend as much as one third of their time considering merger and acquisition opportunities and on others structural business decisions .

"The M&A trend has been a very visible activity in almost all major industries of the world. More and more companies, large and small are instituting joint ventures; others are forming partnerships, marketing deals or of one sort or another and still others are merging or making outright acquisitions." (Hopkins, 1999)

Consequently, M&A have emerged as a strategy in strengthening competitive advantages. Such strategies have been possible by liberalization and globalization. Starting a company and selling it can be the fastest way to create substantive wealth

There are various causes to adopt this strategy to grow instead expanding internally. According to Cassiman and Colombo(2006) the Shorter Product Life Cycle, Globalization of economies and Technological Innovations have led corporate world to re-examine their strategy for growth and diversifications. Trautwein(1990) the faster way to grow is Acquisition of the company which is in line of business of Acquirer because the target is already built organization has own production capacity, distribution channel and some customer base The company which is growing, this strategy of growth also reduces the risk of investment besides growth the M&A strategy is also a cheaper way for expanding than internal expansion particularly in the case where replacement cost of the assets is higher than market value of target.

The broader aspect of this study is to analyze M&A in an integrative manner and at micro level is an attempt to study synergistic gains in M&A deals undertaken by Indian Pharmaceutical Industry.

Therefore, the literature survey is focused broadly on different aspects of M&A focusing particularly on Synergistic gains.

In general there is a good consensus among the research community that corporate M&A is highly intricate and complex phenomena and the complex and vague nature of M&A make it difficult to arrest the phenomenon in singular theoretical framework that provides and capture the phenomenon in all its nuances and intricacies. With regards the factors and reasons behind this complex phenomenon of M&A there are many explanations provided by the research community on this subject. The following discussion is an attempt to highlight and work out the most pivotal of these paradigms as discussed by many researchers. The following discussion is divided into these sub parts for easy flow understanding –

A Conceptual overview of M&A
B. Research Paradigm in M&A
B. Theories of M&A
C. Motives of M&A
    a. Synergy as Motives in M&A
    b. School of Thought

**Conceptual overview of M&A**

Picot(2002) Mergers & Acquisitions (M&A) may connote to a variety of corporate deals ranging from sale and purchase of firms, alliances between undertakings, to the creation of companies, corporate succession ensuring the independence of businesses, management buy-out and buy-in, change of legal form, initial public offerings and even restructuring However, Nakamura (2005) explains that using a broad definition of M&A could lead to confusion and misunderstanding as it entails everything from pure mergers to strategic alliance. He defines mergers as a combination of two or more companies in creation of a new entity or formation of a holding company (Gaughan, 2002, Jagersma, 2005) and defines acquisition as the purchase of shares or assets on another company to achieve a managerial influence (Chunlai Chen and Findlay, 2003), not necessarily by mutual agreement (Jagersma, 2005). A merger is a combination of two companies into one larger company. This action involves stock swap or cash payment to the target. In a merger, the acquiring company takes over the assets and liabilities of the merged company. All the combining companies are dissolved and only the new entity continues to operate. In general, when the combination involves firms that are of similar size, the term, consolidation, is applied. When the two firms differ significantly by size, the term merger is used. Merger commonly takes two forms. In the first form amalgamation, two entities combine together and form a new entity, extinguishing both the existing entities. In the second form, absorption, one entity gets absorbed into another. The latter does not lose its entity. Thus, in any type of merger, at least one entity loses its entity.

Hence, A + B = A, where company B is merged into company A (Absorption)

A + B = C, where C is an entirely new company (Amalgamation or Consolidation)

Usually, mergers occur in a consensual setting, where executives from the target company help those from the purchaser in a due diligence process to ensure that the deal is beneficial to both the parties. In a merger, the boards of directors of the two firms agree to combine and seek stockholder approval for the combination. In most cases, at least 50% of the shareholders of the target and the bidding firms have to agree to the merger. The target firm ceases to exist and becomes part of the acquiring firm; Digital Computers was absorbed by Compaq after it was acquired in 1997. The merger of TOMCO Ltd. with HLL is a classic example of absorption. In a consolidation, a new firm is created after the merger, and both the acquiring firm and the target firm stockholders receive stock in this firm; Citigroup, for instance, was created after the consolidation of Citicorp and Travelers' Insurance Group.

Mergers are commonly referred to as either 'merger by absorption' or 'merger by establishment' (Chunlai Chen and Findlay, 2003, Nakamura, 2005). Merger by absorption is the situation in which one company buys all stocks of one or more companies (i.e., absorbing) and the absorbed companies cease to exist whereas merger by establishment refers to the case where two or more firms are merged into a newly created one and the combining firms in the merger are dissolved (Chunlai Chen and Findlay, 2003). According to Nakamura (2005) merger by absorption could be considered as a de facto acquisition. Besides, the term 'consolidation' could be used to imply a merger by establishment (Gaughan, 2002). In acquisition, the acquiring company may seek to acquire a significant share of stocks or assets of the target company. Consequently, there are two forms of acquisitions: assets acquisitions and share acquisitions (Chunlai Chen and Findlay, 2003). An asset acquisition occurs when a company purchases all or part of the target company's assets and the target remains as a legal entity after the transaction whereas in a share acquisition a company buys a certain share of stocks in the target company in order to influence the management of the target company. Asset acquisition involves buying assets of another company. The assets may be tangible assets, like a manufacturing unit, or intangible assets, like brands. Acquisition of brands of Lakme by HLL is an example of asset acquisition. Corn Products India acquired Captain Cook. Smithkline Beecham acquired the Crocin brand.

(Chunlai Chen and Findlay, 2003, Nakamura, 2005)Depending on the significance of the share of stocks acquired by the acquiring company, acquisitions are then classified into three types: (1) complete take over (100% of target's issued shares), (2) majority (50-99%), and (3) minority (less than 50%)

A firm can also be acquired by its own management or by a group of investors, usually by a tender offer. After this transaction, the acquired firm ceases to exist as a publicly traded firm, and becomes a private business. These acquisitions are called management buyouts, if managers are involved, and leveraged buyouts, if funds are predominantly raised from debt. The acquisition of RJR Nabisco in the 1980s is an example of leveraged buyout. Marren (1993) M&A are the two distinct types of transactions with different consequences regarding legal obligations, acquisition procedures, and tax liabilities However, taking the general view of M&A transactions the final outcome of which is two or more companies combining their business efforts, we do not attempt to separate merger transactions from acquisition ones. Rather, M&A will be treated as one type of corporate finance service that is provided by M&A advisory firms.

**Classification of M&A**

(Gaughan, 2002, Chunlai Chen and Findlay, 2003) in the view of M&A transactions from the perspective of the value chain, M&A can be classified as horizontal, vertical or conglomerate In horizontal M&A, the acquiring and the target companies are competing firms in the same industry. According to Chunlai Chen and Findlay (2003), horizontal M&A has grown rapidly over recent years due to. Vertical M&A are combinations of firms in client-supplier or buyer-seller relationships. The firms involved seek to reduce uncertainty and transaction costs by upstream and downstream linkages in the value chain and to benefit from economies of scope (Chunlai Chen and Findlay, 2003). Lastly, a company may attempt to diversify risks and attain economies of scope by engaging in conglomerate M&A transactions where involving companies operate in unrelated businesses. Gaughan(2002).an example of conglomerate M&A is Philip Morris, a tobacco company, which acquired General Foods in 1985 for US$5.6 billion In addition, (Chunlai Chen and Findlay, 2003) M&A could also be classified as 'friendly' or 'hostile' When an M&A transaction is undertaken in a friendly manner, the board of the target company agrees to the transaction. On the contrary, a hostile deal is one that pits the offer against the wishes of the target, since the board of the target refuses the offer.

Last but not least, (Chunlai Chen and Findlay, 2003) M&A transactions could be either domestic or cross-border with regards to where the companies involved base and operate. A cross-border M&A transaction involves two firms located in different economies, or two firms operating within one economy but belonging to two different countries Accordingly, in domestic M&A transactions, the firms involved originate from one country and operate in that economy-country. The classification of M&A could then be summarized in the table below:

## Types of Mergers

### Horizontal Mergers

Horizontal mergers take place when two merging companies produce similar products in the same industry. In other words, a horizontal merger occurs when two competitors combine. For example, in 1994, two defence firms, Northrop and Grumman, combined in a $12.7 billion merger. If the horizontal merger results in the combined firm's increase in market power, it will have anticompetitive effects, and hence, the merger may be opposed on antitrust grounds. In other words, the acquisition of a firm competing in the same industry as the competitor is referred to as horizontal acquisition. It is stated that horizontal acquisitions of firms with similar characteristics result in higher performance than when firms with dissimilar characteristics combine their operations. These characteristics include strategy, managerial styles and resource allocation patterns.

The firm specific non-managerial human capital can only be supplied by long-term learning effort, or by merging with existing firms in the same industry. The industry specific managerial resources can be obtained by internal learning, or by merging with a firm in the same or related industries. Horizontal mergers take place with a motive to attain market power. It is of concern to the government because it might lead to concentration or monopoly. Hence, comparison between their efficiencies versus their effects of increased concentration must be made. Horizontal mergers may be regulated by the government for their potential negative effect on competition. The number of firms in an industry may be decreased by horizontal mergers.

**Vertical Mergers**

A vertical merger refers to a firm acquiring a supplier or distributor of one or more of its goods or services. These are combinations of companies that have a buyer-seller relationship. Vertical mergers occur when two firms, each working at different stages in the production of the same product, combine. In 1993, Merck, the pharma company, acquired Medco Containment Services Inc, the largest marketer of discount prescription medicines, fof $6 billion. This merger enabled Merck to become the largest integrated producer and distributor of pharmaceuticals. In India, the classical example of a mega merger was the RIL—RPL merger in 2002. Vertical mergers take place between firms in different stages of production operation. There are many reasons why firms want to be vertically integrated between different stages. There are technological economies, such as avoidance of reheating and transportation in the case of. an integrated iron and steel industry. Transaction within firms may eliminate the cost of searching for competitive prices, contracting, payment collecting and advertising, and may also reduce the cost of communicating, and of coordinating production. Some economic activities really do create value that did not formerly exist. Planning for inventory and production may be improved due to more efficient information flow within a single firm. The efficiency and affirmative rationale of vertical integration rests primarily on the costliness of market exchange and contracting. Anticompetitive effects have also been cited as both the motivation for vertical mergers and their result. Most conceived anticompetitive effects assume monopoly power of the integrated firm at one stage of operation. A monopolistic input supplier may be able to practice price discrimination through vertical integration, when input is used by different industries having different elasticises of demand. When the market share of an integrated firm at one stage is large, non-integrated firms at the other stage may be foreclosed from their customers or suppliers.

Note that horizontal mergers are not the only type of mergers that can yield more market power. Vertical mergers can enable a company to capture sources of supplies that are of paramount importance to its competitors. Therefore, industry regulators routinely limit and even disallow horizontal and vertical mergers, if there is even a hint of too much market power concentrating in the hands of only a few companies.

The objective of PepsiCo acquiring Pizza Hut, Taco Bell and KFC was to use the three restaurant chains as distribution channels to sell Pepsi's drinks. Later PepsiCo spun-off its three food units to form Tricon, a separate entity.

The merger between Reliance Industries Ltd. and Reliance Petroleum Ltd. was the largest merger in India that occurred in 2002. Reliance was perhaps the only company that started with crude oil and ended up with saris, shirts and dress materials. The merger was meant to create huge amounts of cash flows every year. One of the advantages of the merger was the huge depreciation cover from RPL. RIL's plants are relatively older and have used up their depreciation cover to a large extent while RPL, whose refinery is relatively new, enjoys a huge depreciation cover on its assets. RPL's products, like petrol, diesel and kerosene, sell mostly on cash basis while RIL's products are sold on credit. Vertical integration helped RIL to insulate its petrochemicals business against price volatility in naphtha. The merger of

Nocil with Polyolefins Industries was a vertical merger with backward integratia for raw materials.

**Congeneric Mergers**

These types of mergers occur when two merging firms are in the same general industry, but have no mutual buyer/customer or supplier relationship, such as a bank and a leasing company. One example is Prudential's acquisition of Bache & Company.

**Conglomerate Mergers**

This merger occurs when the companies are in different industry sectors. Philip Morris, a tobacco company, acquired General Foods in 1985 for $5.6 billion. In other words, conglomerate mergers involve firms in unrelated business activities. There are three types of conglomerate mergers. Product extension mergers are mergers between firms in related business activities and may also be called concentric mergers. A geographic market extension merger involves two firms whose operations are conducted in non-overlapping geographic areas. Pure conglomerate mergers involve firms in unrelated business activities and hence do not involve carryover of industry specific managerial capabilities. Therefore, any benefits related to managerial capabilities have to be in the areas of generic management functions.

**Reverse Mergers**

In a reverse merger, a private company may go public by merging with an already public company that is often inactive. The combined company may then issue securities, and hence avoid incurring the costs and scrutiny normally associated with an initial public offering. An example of reverse merger was the $229 million Ariel Corporation and Mayan Network Corp. merger in March 2001.

**Holding Company** An acquiring company becomes a holding company when it chooses to purchase only a portion of the target's stock. The holding company that owns sufficient stock has a controlling interest in the target. If an acquirer buys 100% of the target, the company is known as a wholly owned subsidiary. It is not necessary to own 100% stock of a company to exert control over it. In case of companies with widely distributed equity base, effective control can be established with as little as 10% to 20% of the outstanding common stock.

**Accretive Mergers**

In these mergers the acquiring company's earnings per share increase. An alternative explanation is that a company with high price to earnings ratio (PIE) acquires one with a low PIE.

**Dilutive mergers**

Here the company with a low P/E will be acquiring one with high P/E.

**Vertical Integration**

The degree to which a firm owns its upstream suppliers and downstream buyers is referred to as vertical integration. The vertical scope of the firm is an important consideration in corporate strategy, on account of its significant impact on a business unit's position in industry, with respect to cost, differentiation and other strategic issues. Vertical integration may be defined as the process in which several steps in the production and/or distribution of a product or service are controlled by a single company or entity, in order to increase its power in the market. In other words, vertical integration refers to the degree of integration between a firm's value chain and the value chain of its suppliers and distributors. Expansion of activities downstream is referred to as forward integration while expansion upstream is referred to as backward integration. Backward vertical integration refers to ownership and control of inputs into the production process, like a chocolate 'manufacturer owning the cocoa-growing plantation. Alternatively, forward vertical integration involves owning and controlling distribution and retail elements of the value chain. A vertical chain represents the various stages from raw materials inputs to the final products sold to the customer. Vertical integration combines firms along the value chain, For example, a steel manufacturer might acquire upstream operations (iron ore mines) and downstream operations (fabricators of steel products). Full vertical integration occurs when a firm incorporates the value chain of the supplier and/or the distribution channel into its own value chain.

The decision on vertical integration depends on factors of cost and control. The cost aspect depends on the cost of market transactions between firms versus the cost of administering the same activities internally within a single firm. The second issue is the impact of asset control, which can impact barriers to entry, and which can assure cooperation of key value-adding players. Large vertically integrated companies, like Exxon, Shell and BP, explore and then drill for crude oil, refine that oil and own many pumps through which they retail their products. In India, Reliance Industries Ltd. is a vertically integrated company. Apple Computers is one of the few successful technology companies which design their own products, control marketing and selling through Apple stores. Samsung is another example of a vertically integrated company.

Vertical integration remained a key strategy during the 1970s, especially forward integration, with companies moving into distribution and sales of their products. But later, in the 1980s and 1990s, the trend turned decisively against vertical integration, as companies discovered the flexibility and efficiency of markets. During this period, the focus shifted to core activities and outsourcing, which emerged as an alternate path to vertical integration. Classical examples of vertical integration can be found in the airlines industry and the petroleum industry. Airlines industry has achieved forward integration through the role of travel agents and backward integration through the role of suppliers in aircraft maintenance, and in flight catering. Oil refining industries have traditionally owned their oil distribution channels, such as gas stations. They later moved into exploration and development.

Carnegie Steel followed the expansive strategy of vertical integration. The company dominated the steel value chain by buying up a host of companies, including coal mines, coke ovens, steel mills, iron ore barges, and railways. During the early 20th century, companies were vertically integrated to the extent that they made their own tool parts and finished products, and were then involved in the sales and distribution of those products. For example, Ford required specialized tools and machinery. Naturally enough, given the specialist nature of the equipment, it was easier for the company to make the tools itself. But this vertical integration was more a product of circumstances than intentional corporate strategy.

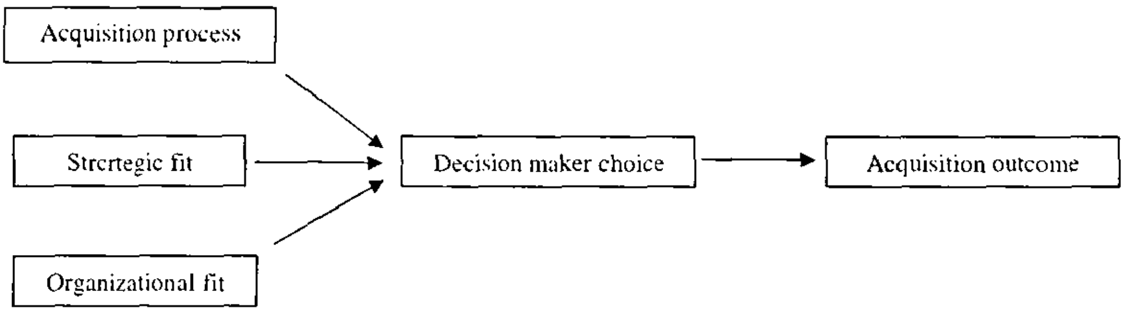
**Research Paradigm in M&A**

There are two research paradigm related to M &A – The Context School and The Process School of M&A research Reus( 2004).The Context School emphasis that the strategic factors are responsible for the success of M&A. These strategic factors are as mentioned by the Reus (2004).

1. Business Relatedness among Combining Firms
2. Prior Experience of the Acquiring Firm.

The Process School regards the M&A implementation is most important aspect in the success of M&A. **Jemison and Sitkin (1986)**rightly define M&A Process into two stages, first stage is - courtship: is a period of searching attractive target, negotiation and contract also include in it. The second stage includes the integration of major functional unit of both the firms such as HR, Accounting, Legal system and cultural systems.) M&A is process itself is most important factors which should be taken into consideration by the management in these M&A activities

Table 1.1




Source: **Jemison and Sitkin (1986)**

**Theories of M&A:**

M&A being a complex phenomenon need multidimensional approach to understand it. There are a number of theories related to different aspects found in empirical research. Theories of M&A tend to focus on Macro & Micro Economics, Finance, Strategic Management etc.

**Halpern (1983)** has categorized M&A motivation theories into two streams, namely:

Value Maximization Theory which includes efficiency theory, informational and signaling theory, market-power and financial motivation theory;

Non-valuation theory considers shareholder and managers, managerial and the free cash flow hypothesis. On another level, external factors such as regulations and laws, globalization, technological progress and economic conditions can also be considered as determinants of M&A.

**Trautwein (1990)** identified seven theories of M&A based upon three groups are as -

1. M&A as Rational choice : Rational choice is subdivided into two parts as
   a. Share Holders Value
   b. Benefits of Managers.
2. M&A as Process outcome
3. M&A as Macroeconomic Phenomenon.

**1. Efficiency theory**

According to this theoretical frame work the M&A are executed to achieve synergies and it enumerates three types of synergies. First, financial synergy targeted to achieve a lower cost of capital through lowering the systematic risk of the acquirer. Second, operational synergy is aimed for operational excellence from a combined firm's operations. Third, managerial synergy could be taken into use to enhance a target's competitive position by transferring management expertise from the bidder to the target.

**2. Monopoly theory**

M&A, in view of Monopoly Theory, take place to achieve market power. The implications of this type of acquisition are that conglomerates use it to cross-subsidize products, to minimise competition in more than one market simultaneously, and to deter the potential entrance of competitors into its market.

**3. Valuation theory**

M&A, this philosophy tells is undertaken by managers who possess better knowledge than the stock market about their precise target's unrealized potential value The basic supposition plays in the acquisition process is that the acquirer possesses valuable and unique knowledge to enhance the value of a combined firm through purchasing an undervalued target or deriving benefits from combining the target's business with its own. The advantageous acquisition could be classified into this theory.

**4. Empire-building theory**

The maximization of personal Goals by the management rather than their shareholders' value maximization through acquisitions forms the core basis of this theory

**5. Process theory**

This approach views strategic decisions as outcomes of processes governed by rational choice. According this theory the M&A activities are the outcome of deduced that it is vague to produce the evidence on the process theory. Though the available evidence is

**6. Raider theory**

Holderness & Sheehan (1985). (cited in Trautwein, 1990) depicted the term, "raider" as a person who helps in wealth transfers from the shareholders of a target firm. "Golden parachute." is treated as the abundant compensation after a successful acquisition transaction as one of the wealth transfer media.

**7. Disturbance theory**

Gort (1969) this approach pronounced that economic disturbances produce the motives of acquisitions. The different theories of motives of M&A and their claimed (benefits/gaps is summarised in the

Table1.2

| MOTIVE | THEORY | DESCRIPTION |
|---|---|---|
| **M&A as a rational choice;** M&A benefits bidder's shareholders | **Efficiency theory** | M&A is planned to and executed to achieve synergies of three types; financial operational and managerial; *Net gains through synergy* |
| **M&A as a rational choice;** M&A benefits bidder's shareholders | **Monopoly theory** | M&A is planned and executed to achieve market power. Horizontal and conglomerate M&A may allow firms to cross-subsidize products, simultaneously limit competition in more than one market, and deter potential entrants from the markets, all of which result in higher market power; *Wealth transfer from customers* |
| **M&A as a rational choice;** M&A benefits | **Raider theory** | A raider is a person who causes wealth transfers from the |

| | | |
|---|---|---|
| bidder's shareholders | | stockholders of the companies he bids for in the form of greenmail or excessive compensation after a successful takeover; *Wealth transfer from target's shareholders* |
| **M&A as a rational choice**; M&A benefits bidder's shareholders | **Valuation theory**<br>**Investment theory** | M&A is planned and executed by managers who have better information about the target's value than the stock market; *Net gains through private information* |
| **M&A as a rational choice**; M&A benefits managers | **Empire building theory**<br>**Agency theory** | M&A is planned and executed by managers who thereby maximize their own utility instead of shareholders' value. |
| **M&A as a process outcome** | **Process theory** | M&A decisions are outcomes of processes governed by one or more of the following influences: organizational routines, political games played between an organization's sub-units and outsiders, and individuals' limited information processing capabilities. |
| **M&A as a macroeconomic phenomenon** | **Disturbance theory** | M&A waves are caused by economic disturbances: Economic disturbances cause changes in individual expectations and increase the general level of uncertainty, thereby changing the ordering of individual expectations. Previous non-owners of assets now place a higher value on these assets than their owners and vice versa. The result is an M&A wave. |

**Source: Trautwein, 1990 and Cox, 2006**

### Motives of M&A

According to Bradley, M., Desai, A., & Kim, E. H. (1988) acquirer motives for M&A can be classified as either value-increasing or non-value increasing. Value-increasing M&As are primarily undertaken to benefit from the synergy in combining the physical operations of the two merging firms.Sudarsanam(1995) acquisition motives may be defined in terms of the acquirer's corporate and business strategic objectives(Sudarsanam,1995) the management have to engage in different types of acquisition activities are enlisted. Gaughan (2002) takes a more pragmatic view to identify M&A motives by referring back to theories but heavily supporting with multiple empirical case studies. According author, four main motives are:

(1) M&A is considered as a means for firms to grow quickly;

(2) M&A firms hope to experience economic gains as a result of economies of scale or scope;

(3) a larger firm as a result of M&A may have a better access to capital market, which later leads to a lower cost of capital, i. e. , financial benefits; and

(4) M&A skills to the target's business are aimed at anticipated gains which a firm may experience when applying its superior management.

Jrisy MOTIS (2007) summarized and analyzed different rationale which have been proposed as motives for M&A and classified different motives into two groups. The distinction between these two groups of M&A motives are based on the different claimants of the benefits which are expected to arise by undertaking M&A activities

- The first group include the drivers which are expected to increase the value of the combine firm and the claimant of this increased value are the share holders of the combine firm.
- The second group includes, drivers which are expected to increase the wealth of the manager of acquirer eve n if the M&A may be result into decrease in value of the firm.

Table1.3

| Drivers increases the value of the combined Firms | Drivers increases the wealth of Managers |
|---|---|
| Economies of scale | Market for corporate control |
| Economies of scope | Free-cash flow |
| Economies of vertical integration | Empire building |
| Diffusion of know-how | Hubris |
| R&D | Risk spreading or diversification |
| Cost savings | |
| Rationalization | |
| Purchasing power | |
| Creating internal capital markets | |
| Financial cost savings | |
| Taxes | |
| Interest rates | |
| Diversification | |
| Enhancement or strengthen of market power | |
| To raise entry barriers | |
| To spread portfolio | |
| To obtain multi market contact | |
| Preemptive and defensive | |
| Disciplinary takeovers | |

Source: Jrisy MOTIS. (2007)

Acording to Jens Gammelgaard (1999) the motives of M&A as – Economies of Scale, Transaction Cost, Growth, Monopoly, Diversification, Financial Synergy, Undervaluation, Empire-building, Synergy & Competence. Berkovitch and Narayanan (1993) summarized (table 1.4) the motives and the gains accrued into three main categories:

Table 1.4

| The merger motive | Total Gains | Gains to target | Gains to Acquirer |
|---|---|---|---|
| 1. Efficiency or Synergy | Positive | Positive | Positive |
| 2. Hubris | Zero | Positive | Negative |
| 3. Agency Problems | Negative | Positive | Negative |

**Source: Berkovitch and Narayanan (1993)**

In theory, total gains for synergy is present; negative for agency problems and zero for hubris. However researchers have not been able to clearly distinguish which motive influenced when reviewing the motives behind M&A activities.

**Synergistic gain in M&A**

Warren Buffett, 1997 Berkshire Hathaway annual report (as cited in Mark L. Sirower, Sumit Sahni (2006) "In some mergers there truly are major synergies—though often times the acquirer pays too much to obtain them—but at other times the cost and revenue benefits that are projected prove illusory. Of one thing, however, be certain: If a CEO is enthused about a particularly foolish acquisition, both his internal staff and his outside advisers will come up with whatever projections are needed to justify his stance. Only in fairy tales are emperors told that they are naked. "

Synergy drivers in M&A have its roots in the neoclassical theory based on the assumption that the management makes the rational decision to maximise the wealth of their share holders and it is assume that market is efficient which means all relevant information available related to market equally accessible to all market participants. Consequently a firm undertake M&A activities only aiming to enhance the value of the firm. Likewise the target accepts only those bid that is above the true value of the firm.

The evaluation of expected synergy as criterion for the post M&A success is one of the most important aspect discussed by many. Several authors on the subject have mentioned it in their research works as the most important factor at the pre-takeover stage (for evaluating the potential target) & at the post M&A stage as the performance evaluation criterion of the deal.

A large number of empirical evidence supports to the importance of synergy as major motives in M&A activities. The synergistic gain is one of the primary motives in M&A. (Bekovith & Narayanan,1993) synergy is one of the factors what firms attempting to achieve when they engaged in M&A (C. W Fontain,2007). The immediate synergistic gains to the firms engaged in M&A activities are as-Staffing Synergy, Technical Synergy & Financial Synergy. Technical Synergy is a key drivers in today's business world and need to be closely examined in M&A activities(C. W Fontain.2007). The combine value of the increases by an average of 7% if the M&A deal is successful (Bradely, Desai & Kim.1988). Sirower(1997) define synergy in terms of increase in cash flows more than what two firms are expected to gain independently, he also define synergy in terms of increase in competitiveness of the combine firms. **Goold&Combell(1988)** major source of synergistic gain are as-Technical Knowhow, Strategies, Shared Tangible Resources, Power of Negotiation & Vertical integration. Trautwein (1990) M&A makers frequently refer value creation and synergistic gain as one of the motives to justify their action.

According to Ansoff (1965)there are three types of synergy -Managerial Synergy, Operating Synergy and Investment Synergy Ansoff (1965) could not explain the reasons for the creation of these synergy, but Porter (1985) explained the reasons of existence of synergy as –"Sharing has the potential to reduce cost if the cost of activities is driven by economies of scale, learning or the pattern of capacity utilization". Synergies are accepted as a legitimate reason for such undertakings since their realization appears to directly correlate with the enhancement of economic performance of a firm (Marco Zappa, 2008). There are two ways of achieving synergies through operations: cost reductions or revenue enhancements. An acquirer may focus on one approach exclusively (all cost reduction or all revenue improvement) or, as is more common, some combination of the two) Mark L. Sirower and Sumit Sahni (2006).

As per the **Synergy Hypothesis**, synergy creation is the major motivation behind takeovers According to this hypothesis, synergy is created when the aggregate value created through the combination of two companies is greater than the algebraic sum of the individual companies. In this sense the notion of synergy is fallout of the **systems theory**. According to Drucker (1981) synergic effects take place when two substances or factors combine to produce a greater effect, more than the sum of those together operating independently. According to resource-based view of the firm, Markides & Willamson (1996) such a value creation is possible when there is a high degree of strategic relatedness between the two firms, measurable in terms of compatible or complementary strategic assets. In fact strategic relatedness and subsequently the resources and avenues for synergy creation may exist in various forms. Those might exist as **attributes** of the companies involved in an M&A deal, while others exist as **factors** that only become apparent when companies started an M&A process and may even exist as **conditions** that emerged after the integration of target companies. According to Copeland, Koller, & Murrin (1994) while organizing acquisition one must make sure of synergies, evaluate one's strengths and weaknesses, identify value-adding methods reinforce core business, identify opportunities of scale economies, and identify benefits from technology or skills transfer in particular determine of financial engineering opportunities. According to Drucker (1981) one must first try to acquire a target with similar technologies or markets or production processes to those of buyer and further measure the potential improvements, in addition to money, created by the buying firm. Resources and avenues for synergy creation may exist in various forms. Those might exist as **attributes** of the companies involved in an M&A deal, while others exist as **factors** that only become apparent when companies started an M&A process and may even exist as **conditions** that emerged after the integration of target companies.

Therefore, the above premises and concepts on synergy provide with the basic framework upon which most M&A initiatives are based. According to the principle of synergy (2+2=5) the purpose of M&A deals is to maximize the shareholder's value of the combined entity. Synergy is the ability of a company to create more shareholder value than the standalone entity. As per Markides & Willamson (1996) if synergy is perceived to exist in a takeover, the value of the combined firm should be greater than the sum of the values of the bidding and target firms, operating independently.

Hence, V (AB) > V (A) + V (B)

Where, V (AB) = Value of a firm created by combining A and B (Synergy)

V (A) = Value of firm A, operating independently

V (B) = Value of firm B, operating independently

The value created by the combination of firms may result from more efficient management, economies of scale, improved production techniques, combination of complementary resources, redeployment of assets to more profitable uses, exploitation of market power, or any number of value creating mechanisms that fall under the general rubric of corporate synergy. The issue of typologies and sources of synergy creation has evoked lot of research on the subject of M&As. By merging and customising resources differently, an M&A can experience three kinds of synergies. First, companies create **modular synergies** when they manage operations independently and pool only the results for greater profits. In a joint collaboration between an airline and a hotel chain, where the hotel's guests earn frequent flyer miles, clubbing of consumer's choice of hotel and airline benefits both the organizations. Second, firms derive **sequential synergies** when one company completes its tasks and passes on the results to a partner to do its bit. In such cases, the resources of the two firms are sequentially interdependent. For instance, when a biotech firm specializing in discovery of new drugs, like Abgenix, works with a pharmaceutical giant more familiar with the FDA approval process, such as Astra Zeneca, both companies are seeking sequential synergies. Fred Weston, Kwang S Chung, Susan E (2006)third, companies generate **reciprocal synergies** by working closely together and executing tasks through an iterative knowledge sharing process. According Peter J. Williamson and Paul J. Verdin (1992) Exxon and Mobil realised that they would have to become more efficient in almost every part of the value chain from research and oil exploration to marketing and distribution in order to remain competitive

The potential synergies that could probably be created through an M&A are based upon the unique strategic assets between the acquirer and the target firm. Those unique assets could be classified into five categories firstly, customer assets i. e. , brand recognition, customer loyalty, and installed base; secondly,channel assets i. e. , established channel access, distributor loyalty, and pipeline stock; thirdly,input assets i. e. , knowledge of imperfect factor markets, loyalty of suppliers, and financial capacity; fourthly,process assets i. e. , proprietary technology, product or market-specific functional experience, and organizational systems; and lastly market knowledge i. e. , accumulated information on the goals and behaviour of competitors, price elasticity of demand, or market response to the business cycle.

Following the brief discussion above their emerges a normative division on the typologies of synergies that could be aptly categorized as schools of thoughts in synergy value- in takeover processes namely,

1-The Strategy School

2- The Marketing/Commercial School

3- The Financial & Economic School

4-The Production/Operational School

5. The HR & Knowledge Management School

These schools of thought on synergy types emanate technically from the functional domains of the discipline of business management. The table below presents the functional division between the four synergy types along with a few major references to mark their significance in M&A research studies. . The diversity of schools of thought on synergy classification authenticates this point. In the table 1.6 the classification of different school of thought and their major references have been summarised

Table 1.6

| S. No. | School of thought for synergy value drivers | Major References |
|---|---|---|
| 1 | Identify potential strategic synergies | Sirower (1997); Jemison & Sitkin (1986); Lubatkin, (1983):Ernst & Young (1994); Penrose (1959);Kode, G., Ford, J. & Sutherland, M. (2003); Christofferson, SA, RS McNish and DL Sias(2004)Porter (1985) ; Peter Drucker, (1981) ;Lewellen (1971) ;Tetenbaum, Tony J. (1999); |
| 2 | Identify potential marketing/commercial synergies | Marks & Mirvis (1998) ;Ernst & Young (1994); Demsetz (1973) ;Peltzman(1977): Jemison & Sitkin (1986):Reid, (1968); Steiner(1975):Chatterjee(1986); Ansoff( 1965);Christofferson (2004)); John M.T. Balmer, Keith Dinnie (1999)"; Weston J Fred. Johnson ,Brian A,and Siu A Juan (1999) ;Marren, H.(1993) |
| 3 | Identify potential financial synergies i. e. . Opportunities for financial re-engineering/potential tax benefits; valuation school | Ackoff (1981); Ernst & Young (1994) Salter & Weinhold (1979)); Sirower (1997), ; Fluck Zsuzanna and Anthony W. Lynch (1999); |
| 4 | Identify potential production synergies | Markides & Willamson (1996); Copeland, Koller, & Murrin (1994) Sirower (1997), Patricia L. Anslinger, Thomas E. Copeland (1996); Michael Porter (1985);;Jemison & Sitkin (1986);Weston J Fred. Johnson ,Brian A,and Siu A Juan (1999); |

## The three Major Schools

### Strategy School of Thought

Porters' competitive advantage proposition is one of the important basis for the strategy school of in M&A activities Porter (1985) has established the association between the competitive advantages of the firm with concept of 'Synergy'. Furthermore according to Porter (1985), there are two main generic strategies can be adopted by business firms in order to gain competitive edge ; Cost Leadership & Differentiation.

Gerry Johnson, Kevan Scholes, Richard Whittington (2008) M&A is one of the means by which the corporate firms pursue their strategic motives such as -

*Speed of entry*: Products or markets may be changing so rapidly that M&A becomes the only way of successfully entering the market, since the process of internal development is time taking.

Competitive situation may influence a company to prefer M&A. In static markets and where markets shares of companies are steady it can be difficult for a new company to enter the market, since its presence may create excess capacity. If entry is by acquisition the risk of competitive reaction may be reduced.

**Consolidation Opportunities:** Where there are low levels of industry concentration, there may be an opportunity for improving the balance between supply and demand by acquiring companies and shutting down excess capacity. In many countries, exploitation of strategic capabilities can motivate acquisitions, for example through buying companies overseas in order to leverage marketing or R&D skills internationally.

Cost efficiency is a commonly stated reason for acquisitions typically by merging units so as to rationalize resources (for example, head office services or production facilities) or gain scale advantages.

Obtaining new capabilities may also be achieved through acquisitions, or at least be a motive for acquisition. For example, a company may be acquired for its R&D expertise, or its knowledge of particular business processes or markets.

To large extent Strategic Management School focus on the degree of relatedness between the Acquirer & Target and strategically classifying M&A can be described are based on the related-complementary and related-supplementary concepts developed by Salter and Weinhold (1979)

A purely related-complementary fit is vertical integration while a pure related-supplementary fit is horizontal integration. A related-supplementary target business provides the bidder primarily with access to new customers and markets rather than with new assets or products. Related complementary target businesses bidder with new products, assets or skills for product markets currently served by the bidder rather than with access to new markets. Table illustrates the four possible strategic fits between a target and a bidder business provide.

**Table 1.7 Strategic Fit between Target and Bidder Business**

| Adding New Product | | |
|---|---|---|
| | Related-Complementary<br>New products<br>Similar customer | Unrelated<br>New Products<br>New customers |
| | Identical<br>Similar Products<br>Similar customer | Releted-Supplementery<br>Similar product<br>New customers |

Serving New Customers

Source: Salter and Weinhold, 1979

"Each of the four strategic fits represents different types of asset combinations, and thus different opportunities for value-creation. Opportunities creativity or entrepreneurial ideas in order to use existing bidder assets most effectively in exploiting the new markets made available by acquiring the target. Related-complementary and related supplementary fits may provide opportunities to cut costs by equivalent amounts, but related supplementary fits offer more intense utilization of entrepreneurial ideas. In order for one business to be related to another, at least three of the following four criteria must be fulfilled: (1) similar type of customers served, (2) similar type of product sold, (3) similar technology used in production, and (4) similar purpose served in use. Customers are classified as either (1) consumer, (2) professional, (3) industrial, or (4) government. Customers are defined to be the intended end users of a product or service sold by a business. Professional customers include doctors, dentists, lawyers and other professionals. Since businesses sell products at different stages of production products can be grouped into three distinct categories: (I) retail or finished goods, (2) wholesale and intermediate goods, and (3) raw materials. Businesses producing products involving similar technology may be related even if the products in question are used by dissimilar customers. Finally, customers often use related products to perform similar functions, or for similar purposes. As a result the footwear market is related to the clothing market, but not to the household appliance market, even though consumers purchase shoes, suits and microwaves. Markets can be considered roughly equivalent to industries Since a merger often consists of various types of asset combinations. the strategic fit system presented here provides a more accurate means of measuring the value creation impact of these asset combinations. Business fits in which the assets of either the target or the bidder are used more intensively-identical, related-complementary and related-supplementary-create value. However, acquisitions that permit expansion into new markets (related-supplementary) or within the same business (identical) create the most value. "

**Table 1.8: Method of determining whether target and bidder business are related**

**Similar customer type?**

Consumer, Industrial, Professional, Government

**Similar product type?**

Retail, Wholesale, Material

**Similar product**

Finished intermediate

**Similar technology in production?**

Affirmative answers to three or more question indicate that the Businesses are related.

Affirmative answers to fewer than three questions indicate that the businesses are unrelated.

**Source: Lois M. Shelton (1988)**

Gerry Johnson, Kevan Scholes, Richard Whittington (2008) In the authors' view, corporate acquisitions are intended to develop organizational capabilities, which can be created only through careful management of M&A process. They focus on the process of developing capabilities and the transfer of skills, examining in depth the intra organizational dynamics and interactions that either facilitate or impede value creation. Issues of change, conflict, and dislocation are placed within the broader context of strategic management.

Broc Romanek and Cynthia M. Krus (2002)"Merger and acquisition activity is being propelled by a number of strategic factors, including competition, rationalization of business, technological revolution, and globalization.

Bower (2001) identified five distinct strategic reason for M&A; to reduce capacity, to implement geographic expansion, to extend product line, to acquire R&D capability, to exploit emerging convergence of industries. Bower suggest that in the present situation of globalization, hyper-competition and accelerated technological changes –to cope with these changes through M&A, managers of the acquirer firms must be ready for different post merger implementation plan in different situation.

**HR School of M&A**

The empirical evidence both, domestic and international have primarily been focused on the evaluation of performance of M&A in terms of financial and strategic success. The relationship between human and cultural factors and synergistic gains usually are lacking. However, most of the problems that adversely affect the performance of M&A activity generated by the acquirer and by dynamics in the new entity. So there is a significant need to go beyond the strategic, financial and operational consideration per se and to HR and cultural issues which emerges during the process of M&A. The HR school of M&A has recognized that in today's economy, the management of human side of change is the important aspect to maximize the synergistic gains in M&A. Fitz-enz(1995). (Cited, Nina Pološki Vokić , Maja Vidović (2007) Traditional sources of competitive advantage, such as production capacities, research laboratories, access to financial resources, distribution channels or economies of scale, are said to be necessary but not sufficient for success in today's business world. Everyone acknowledges that people are the key assets in the new world market, and that all other assets are nothing more than commodities that can be purchased at market prices, because only the human asset has potential to learn, grow, and contribute. Consequently, the human resource management, which deals with recruiting, developing, and keeping the best people, now has the opportunity to move out of the background into the mainstream of organizational strategy and management. Thus, HR perspective considers the psychological and behavioral aspects which affect the outcome of M&A in the form of value creation

**Strategic fit between M&A and HRM**

Ernst and Young (1994), (cited, **Dr. Nick Milner, 2010)** there are three elements to consider in a successful merger - people, processes and technology/systems A merger must have a plan but "what issues should be addressed in the plan?" write Ernst and Young (1994). They believed that "the performance of any company rests squarely on the closely interrelated factors - its processes, people and technology. A successful strategy must address all three. Sudarsanam (1995), (cited, **Dr. Nick Milner, 2010**)reviewed the literature and noted that "the human factor emerges as a key dimension of both pre-acquisition planning and post-acquisition management. " Hunt et al (1987), ((cited. **Dr. Nick Milner, 2010**) studied 40 companies in the UK and US and listed the human factors most often associated with success.

Table 1.9

| | (%) |
|---|---|
| Interface between companies perceived as well managed | 77 |
| Clear Vision Companies perceived as well | 68 |
| Clear Vision Communicated | 68 |
| Perceived business benefit to acquired | 64 |
| Honourable rhetoric | 59 |
| Buyer Management earns credibility and respect | 55 |

Source: Hunt et al ,1987,cited, **Dr. Nick Milner, 2010)**

Cartwright and Cooper (1993) found in their study that merger and Acquisition are not just financial transactions, but rather processes which may significantly affect the working lives of people. **C. W. Fontaine, (2007)** Research shows that consistently 65% of mergers and acquisitions that fail do so because of people issues – cultural issues, communication issues, and so forth.

**Lack of Communication**

Lack of communication during mergers and acquisitions has long been identified as the most critical need. As we examine the HR issues involved, you will see a lot of references to the fact that people resist mergers, acquisitions, and especially takeovers at a personal level. The reason why they resist at a personal level is because they have not been told ***why*** things must change or ***how*** they are going to change.

**Lack of Training**

As companies merge and acquire one another, they tend to merge technologies. They also merge policies, processes, and procedures. In a merger situation, you end up with 50% of the people do not know the new software, policies, processes, and procedures. If you don't train those people, and spend some of your resources on training, that will end up being negative influence on your outcome

**Loss of Key People**

Good people – key people – tend to leave organizations at this juncture .Many people are afraid of losing their jobs. It is a well-known fact in the business world that mergers M&A usually cause staff reductions. People who are talented – the exact kind of people whom you want to retain in the organization – are exactly the kind of people who are going to put their resumes out and probably go to your competitor.

**Corporate Culture Clash & Power Politics**

Corporate culture is a fundamental asset (or even liability) for organizations. If one company with one style takes over a company with another style, that is indeed a difference – and it is a huge difference. Some people feel comfortable in the one setting and some do not. The clash of two cultures can be so detrimental that you lose key people.

Uday Bhaskar ,Kanika T. Bhal ,Bijaya Mishra (2012) " There are a host of HR issues which affect the success of M&A like retention of key talent, work redistribution after lay-offs, salary and reward structure, redesigning of performance appraisal system, aligning the HR systems in the new merged entity, integration teams/committees, power balance between the two merger partners, etc. Loss of critical talent is considered a significant reason for M&A failure. Md. Abdur Raquib, Md. Pauzi Bin Musif, Musthafa Bin

Mohamed (2001) the top seven obstacles to M&A success are: (1) the inability to sustain financial performance; (2) loss of productivity; (3) incompatible cultures; (4) loss of key talent; (5) clash of management styles/egos; (6) inability to implement change; and (7) objectives and synergies not well understood. Pritchett (2006) (cited Harrison, S and Farrell P (2008) suggests that; in a merger situation there are usually some major changes people have to deal with. Employee's very often feel a strong sense of loss. The camaraderie within a close-knit work group may be sacrificed because departments are merged. Some people lose authority, and a lot of people may lose a significant degree of job satisfaction. Some people in the company will have to struggle with strong feelings such as fear, worry, sorrow, anger, and regret. In some employees it will be very obvious. Both individuals and organizations have relatively consistent patterns of reaction to a merger. Individuals typically become withdrawn and preoccupied with their own survival, and organizations tend to withdraw into crisis management, which often involves secrecy and centralized decision making: in most cases this organizational response exacerbates the negative impact of the merger on employees. Executives may be optimistic about the merger, because they have more control over the situation and better access to information. The majority of staff, on the other hand, are typically pessimistic or angry about the change Mergers and acquisitions can be threatening for employees and produce anxiety and stress. Hunsaker and Coombs (1988), (cited, *Deborah A. Pikula*, 1999)found identifiable patterns of emotional reactions experienced by employees during a merger or acquisition; they have labelled this phenomenon the 'merger-emotions syndrome

**Denial:** At first employees react to the announced merger with denial. They say it must be 'just a rumour. '

**Fear:** When the merger becomes a reality, employees become fearful of the unknown. For example, workers become preoccupied with job loss.

**Anger:** Once employees feel that they are unable to prevent the merger or acquisition from taking place, they begin to express anger towards those who are responsible. Inmany instances, employees feel like they have been 'sold out' after providing the company with loyal service.

**Sadness:** Employees begin to grieve the loss of corporate identity and reminisce about the good old days before the merger.

**Acceptance:** Once a sufficient mourning period has elapsed, employees begin to recognize that to fight the situation would be useless, and they begin to become hopeful about their new situation.

**Relief:** Employees begin to realize that the situation is not as inauspicious as they had envisioned and that the new employees they interact with are not as bad as they had predicted.

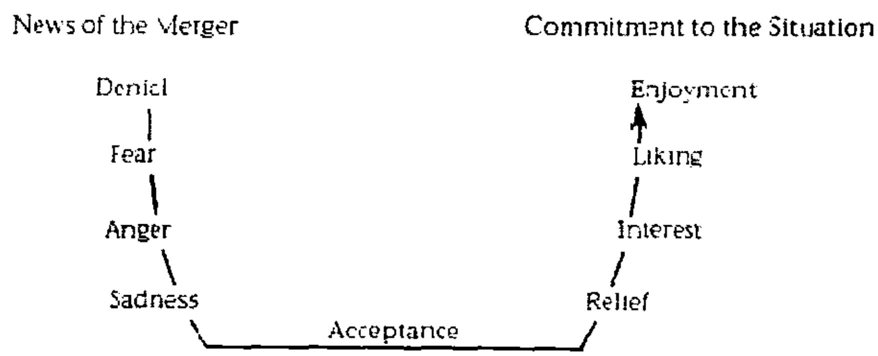
**Interest:** Once people become secure with their new positions or with the organization, they begin to look for positive factors and for the benefits they can achieve through the new entity. They begin to perceive the new situation as a challenge in which they can prove to their organization their abilities and worth.

**Liking:** Employees discover new opportunities that they had not envisioned before and begin to like their new situations.

**Enjoyment:** Employees discover that the new situation is working out well and feel more secure and comfortable.

**1.10 :** Stages in the Merger-Emotion Syndrome (cited in Deborah A. Pikula, 1999)

**Stages in the Merger-Emotions Syndrome**




Source: Hunsaker and Coombs (1988, 60).

**Corporate Culture:**

One of the crucial aspects included in the HR issues related to the M&A is the compatibility of culture of target with the acquirer. Considering the human factor in relation to the firm culture has been a second significant focus of attention. No clear-cut findings about the impact on performance have yet emerged.

Cultural differences look like playing both ways, although distant cultural environments make the M&A integration process harder. In the studies, the lack of culture-fit or cultural compatibility has often been used to explain M&A failure. Cultural differences have also been considered a source of lower commitment to work, making co-operation more difficult, particularly from employees of the acquired firm. Israel Drori, Amy Wrzesniewski, Samuel Ellis (2011). Cultural differences between merging organizations have been found to be negatively associated with the commitment of the acquired firm's top management to the merger's success and with the acquiring firm management. Corporate culture provide employee with an identity and commitment with their organization, they perceive that their way of doing thing is superior to the style and practice of the other company. Therefore, it is no surprise that strong cultural differences are usually associated with a negative impact on M&A performance, since the integration process is less easy and deals with higher employee resistance, communication problems, and lower interest in co-operation. Gilkey (1991) (cited, Mohibullah, 2009), high percentage of failure is mainly due to the fact that mergers and acquisitions are still designed with business and financial fit as primary conditions, leaving psychological and cultural issues as secondary concerns. (Ellemers & al., 2004; Bartels & al. , 2006). (cited, Nicola Mirc, 2007) high levels of employees' social identification with the organization's identity results in increased work effort, higher performance, reduced staff turnover and more frequent involvement in positive organizational citizenship. Pete Forna (2005) organizations excel when they have a clear purpose that is shared by all members of the team. It is extremely difficult to gain synergy when two organizations have conflicting operating styles. When faced with this scenario, some organizations have had to "rebuild" themselves at great sacrifice to customers and employees. Ensuring before M&A that there is basic synergy of culture can make a vast difference in the success or failure of the project. Isaac E. Dixon(2005) Studies conducted on the outcome of M&As show that 30% of them fail within three years, with the majority due to disparities in organizational cultures. Much of the anxiety and mistrust begins with the perception that there are winners and losers in M&As. These perceptions are largely due to the nature of the process. Nancy C. Nelson, *(2005)* Cultural integration needs to be part of the due diligence checklist, not an afterthought that is addressed only after the deal is done. Clay Deutsch & Andy West (2010) (2010) Ninety two percent of the survey respondents said that their deals would "have substantially benefitted from a greater cultural understanding prior to the merger." Seventy percent conceded that "too little" effort focuses on culture during integration.

**Knowledge Management**

*The winners of tomorrow's market place will be the masters of knowledge management''*

Bresman,H.; Birkinshaw, J. M., and R. Nobel, (1999)

Technology & know-how is one of the important dimension play a crucial role in the success of any pharmaceutical firm.

A firm's knowledge base generally consists of diverse kind of knowledge such as knowledge required in manufacturing or knowledge related to new product development. Knowledge Management may be defined as-

Drucker, 1995 (cited, Mostafa Jafari, Peyman Akhavan, Ashraf Mortezaei, 2009) Business and economic theory is increasingly concerned with the role of organizational knowledge. As a source of economic success.

The prime focus of M&A activities in knowledge led industries such as in Pharmaceutical is to acquire Research and Development Capabilities of the target to achieve the knowledge related synergies. Wysocki (1997) the knowledge seeking M&A are quite frequent and it's a major source of value creation. Nonaka.I,Takeuchi.H (1995) knowledge Management is a strategic concern for many firms.

Nonaka and Takeuchi (1995) classify human knowledge into two basic varieties: Explicit knowledge, also known as formal or codified knowledge, and tacit knowledge, also known as informal or uncodified knowledge. Explicit knowledge, for example, occurs in the form of books, documents, databases and manuals. It can be articulated in formal language and thus be transmitted across individuals formally and easily. Tacit knowledge, in contrast, is personal knowledge which exists symbolically in the human mind and is hard to articulate with formal language. It is embedded in individual experience and involves intangible factors such as personal belief, perspective and the value system. Therefore, tacit knowledge is difficult to be made explicit, even though the emergence of communication and information technologies has led many companies to imagine a new world of leveraging knowledge. Nevertheless, both types of knowledge, tacit and explicit, are important and knowledge-creating activities take place within and between humans. Some distinctions between tacit and explicit knowledge are shown in table 1.11 Characteristics generally related to the more tacit features of knowledge are listed on the left, while corresponding qualities associated to explicit knowledge are named on the right.

Table 1.11

| **Tacit Knowledge (Subjective)** | **Explicit Knowledge (Objective)** |
|---|---|
| knowledge of experience | Knowledge of Rationality |
| (observation inference) | (mind) |
| Simultaneous Knowledge | Sequential Knowledge |
| (at the present moment) | (past events or object) |
| Analog Knowledge | Digital Knowledge |
| (paractice | (theory) |

Source : Nonaka and Takeuchi (1995)

Marije Keizer (2012) it is necessary to gain new knowledge from acquired companies (knowledge identification). Because companies have to continue their business and remain innovative this knowledge has to be stored within the organizational memory (knowledge retention) after which it can be transferred and shared within the acquiring firm (knowledge transfer) and applied and commercialized (knowledge application). For both firms to keep up with the knowledge cycle, knowledge creation is the last and circle closing step in order to keep continuous learning and stimulating innovation. However, the circle loops back to knowledge transfer and not to knowledge identification because the critical knowledge is already identified and retained and creating new knowledge.

Nima Amiryany, Huysman, A.P de Man, Cloodt (2009) In a very simplified manner one can state that acquisitions create value through knowledge sharing and that this knowledge sharing is influenced by the decision making process that takes place before the deal is closed. Marije Keizer (2012) knowledge is an asset and knowledge needs to be acknowledged as such to be taken advantage of. However, in contrast to other assets knowledge does not disappear when sharing or using it. It only disseminates. Therefore, one might even consider knowledge as the biggest value creation asset.

Maria Rumyantseva, Grzegorz Gurgul, Ellen Enkel (2012) The critical role here plays the time factor, as the competition in many industries makes natural growth excessively time consuming, M&A is an attractive way to expand the knowledge base faster. It is most obvious in the high technology industries, where the fastest access to new knowledge determinates future market share. Interesting insights concerning knowledge transfer are published by the practitioners-

Sikora, 2001 Maria Rumyantseva, Grzegorz Gurgul, Ellen Enkel (2012)).

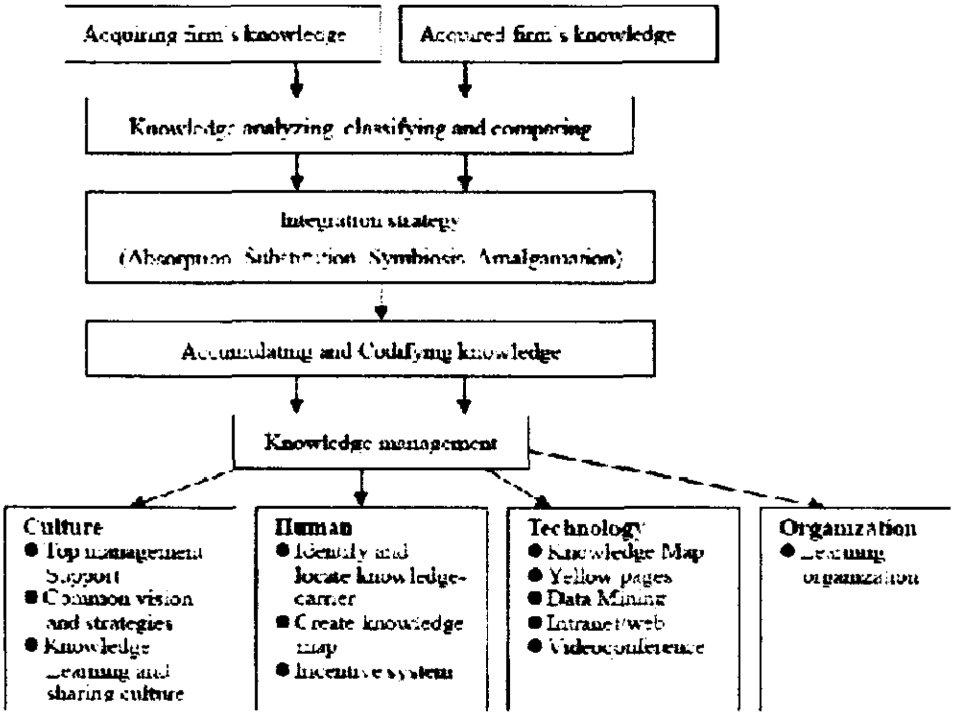
"Among the three classes of company assets: tangible, intangible and financial, the correlation with past and future earnings is highest for the intangible assets. The understanding of the source of value in the intangible asset value streams and measuring the earnings coming off the intangible assets build a new frontier in shareholder value management. "The payment of a large premium for an acquisition over the target company's market price, which includes in it an embedded expectation about future growth, that premium is going to have to be recovered largely on the basis of how effectively the combined intangible resources of the new company are managed"

Grotenhuis F, Weggeman (2002 ) synergies creation as a result of knowledge sharing in M&A are dependent on several factors, such as communication, motivation, and rewarding people. Key people should be identified to keep them committed to the new combined company. An atmosphere of trust is crucial. Furthermore, the exchange of people is helpful for learning and for a better understanding of each other's culture and way of working. An integration of the cultures seems to be an important condition for knowledge creation in case of mergers and acquisitions.

It is clear from the brief literature survey that Knowledge Management in M&A activities is one of the crucial factor need to consider in M&A process in order get synergistic benefits for success in deal. Knowledge Management synergy cannot be realized by considering a single factor, e. g. technical knowledge sharing cannot yield any synergy unless people of both the firms cooperate in sharing of their knowledge with each other and their culture is compatible with one another. So, In Knowledge Management School of thought the synergy drivers or key consideration are as –

1. Sharing of Technical Knowledge
2. Keeping of Key people committed.
3. Addressing cultural issues of both the firms.

### 1.12 Knowledge Management Process in M&A




**Source: Chen Jian Jia Jun (2001).**

On the basis extensive literature review we found there are thirty eight most common key considerations/variables discussed by researchers regarding the motive and synergistic gain in M&A deal given as in the table:

**Table 1.13**

| Variables | Key drivers | Major References |
|---|---|---|
| [redacted] | [redacted] | [redacted] |
| $X_1$ | Distinctive competencies formed and competitive advantage generated due to integration | [redacted] |
| $X_2$ | Scope for corporate restructuring and business process reengineering | Albert de Graaf (2010) |
| [redacted] | persistent growth rate close to industry benchmark | Sirower (1997), Jemison |
| $X_4$ | Scope for diversification in unrelated business zones | & Sitkin (1986); [redacted] Lubatkin, |
| [redacted] | Horizontal linkage or integration i.e getting an edge over the competition | (1983); |
| $X_6$ | To take off fast in the line of business selected by minimizing any gestation period | Penrose (1959); Kode, G., Ford, J. & Sutherland, M. (2003) |
| $X_7$ | Seeking a rapid increase in market shares of the buying firm | Christofferson et al. (2004); |
| $X_8$ | compatibility with acquirer's product market strategy and policies | Michael Porter (1985); Peter Drucker, 1981; |
| $X_9$ | To buy the goodwill of the firm and brand equity of the product(s) without having to build the same yourself | Lewellen (1971) [redacted] Marks & Mirvis, 1998; |
| $X_{10}$ | Scope for product lines or mix to fit into existing or modified line extensions/ configuration for cost saving in marketing, sales and distribution | Chatterjee, 1986: Ansoff 1965 Weston, J. Fred e[redacted] (1999); |
| $X_{11}$ | Reduced competition by buying over competitors, distributors, customers and end users | Ackoff (1981); |
| $X_{12}$ | Getting entry into new markets | |
| $X_{13}$ | Procurement Economics of Scale | Salter & Weinhold (1979) |
| $X_{14}$ | the existing distribution channel may get better leveraged to ship supplementary/Complementary products to[redacted] the existing/new customers | Sirower (1997), [redacted] |
| $X_{15}$ | Further build or strengthen core competencies | Barney, J. B. (19[redacted] Marije Keizer (201[redacted] |
| $X_{16}$ | New Products/Services for Existing Customers | |
| $X_{17}$ | Creation of One-Stop Shopping for Customers | |
| $X_{18}$ | Obtaining Superior Products/Services | Arkadiy Vasilyevi[redacted] Polyarus, Anna Alexandrovna Severgina |
| $X_{19}$ | New Customers for Existing Products/Services | |

| | | |
|---|---|---|
| $X_{20}$ | New Distributors/Distribution Channels for Existing Products/Services | and Kseniya Sergeevna Borzenkova(2013) |
| $X_{21}$ | Image With Customers Is Improved | Markides & Willamson (1996); |
| $X_{22}$ | Obtaining Superior Markets | |
| $X_{23}$ | compatibility with acquirer's product market strategy and policies | |
| $X_{24}$ | Reinforcement and uplift of brand image | Aswath Damodaran(2005) |
| $X_{25}$ | Business gains from major customer accounts remain unhurt owing to the deal | Copeland, Koller, & Murrin (1994) |
| $X_{26}$ | Scope to strengthen brand umbrella and rationalize and secure product portfolio | Sirower (1997); Patricia L. Anslinger, Thomas E. Copeland (1996) |
| $X_{27}$ | customer's satisfaction may get enhanced due to superior products and services | Hiroyuki ITAMI, |
| | A clear cut increment in EPS | Thomas W. Roehl. (1987) .Zaheer.A., |
| $X_{28}$ | Accessibility of adequate funds as working capital and capital expenditure to meet calculated and contingent expenses related to growth | Castaner,X., and Souder,D (2008) |
| $X_{29}$ | Scope for post integration financial restructuring or/and financial process re-engineering | Charu Banga and Amitabh Gupta(2012)" Johan Holtström and Helén |
| $X_{30}$ | To generate immediate cash flows The acquirer gets cash inflows from the day one from existing customers, distributors of the acquired unit | Anderson Jani Kinnunen (2010) |
| $X_{31}$ | To reduce costs of recruiting, selecting and training fresh manpower | KPMG (1999) Kaplan, S. N., & Weisbach, M. S. (1992) |
| $X_{32}$ | Corporate Culture Is Improved | |
| $X_{33}$ | The targett firm has similar behavioural systems and processses including cultural practices,leadership style and low incidence of corporate politics or negative conflict | Stefan Karenfort (2011) Michael Hitt,David |
| $X_{34}$ | Rationalization of unsuitable staff and redundant workforce with low exit cost | King,Hema Krishnan,Marianna Makri and Mario |
| $X_{35}$ | Reinforcement and uplift of corporate identity | Schijven (2009) |
| $X_{36}$ | Matching and corresponding competencies and knowledge resources | Grotenhuis F, Weggeman (2002 ) |
| $X_{37}$ | Simplicity and procedural ease in reallocation and sharing of competencies and knowledge resources | Read, S.R (1968) Pete Forna (2005) |
| $X_{38}$ | Obtaining Superior Technologies | |

## Post M&A Performance Analysis

Post M&A performance measure has been part of organizational behavior, the strategic management and corporate finance literature for decades. According to Zollo, M., & Singh, H(2004 )"there exists much heterogeneity both on the definition of the performance of M&As and on its measurement".

There are four principal methodologies are found in empirical research to measure the post M&A performance. While first consider the external data, such as market reaction to the event of M&A. The second method focus on operating performance or accounting performance in which internal data generated by either one or both of the merging firms. The third approach assess the performance data about the performance and motives of M&A collected indirectly through self reported questionnaire administered to the people who are participants of M&A deals or those who are having insight into it. The fourth approach to assess the post M&A performance is to make an in-depth analysis of particular case is called 'clinical studies'.

**Market based measure**

**Steven N. Kaplan (2006)** "Financial economists have used a number of measures to evaluate acquisition success. Probably the most common is the change in the company's value at the time of the announcement of the acquisition, generally 3 to 11 days. This attempts to measure the market's expectation of the change in value from the acquisition. Depending on the question, financial economists look at the change in value of the acquirer, the target, and the combined entity". Many past studies on M&A utilized security price changes around the announcement day as a performance measure. A large number of studies on M&A have used 'event study' tool to make their analysis of market reaction to the announcement of deals. Some of them are -Jensen and Ruback (1983); Chatterjee (1986); Singh and Montgomery (1987); Bradley, Desai, and Kim (1988); Jarrell, Brickley, and Netter (1988); Franks and Harris (1989); Cybo-Ottone and Murgia (2000); . Pandey. A (2001); Chakraborty (2010); B Rajesh Kumar and S Panneerselvam(2009); Gupta, A. (2008);Gupta, A. (2006); Rachappa and Satyanarayana (2007) T Mallikarjunappa and Panduranga Nayak(2013)

Mann and Kohli (2008).According to Cannella & Hambrick (1993) the reason for the popular utilization of the above incomprehensive measure is that, "there is little public information available on the performance of acquired firms after the acquisitions has been consummated".

Despite the fact that 'event study' methodology are quiet popular tool but according to Caves (1989) there is no correlation between the market value of equity and performance of firms. Healey, P. M., Palepu, K. U., & Ruback, R. S. (1992)the market value gain may be due to capital market inefficiency.

**Operating Performance Measure**

Operating performance measure studies use accounting-based measures (such as operating margins) and productivity-based measures (such as total factor productivity) to evaluate acquisition success. This method involves the financial statement and ratios to compare pre and post M&A financial performance of the acquiring firm. In some the cases it also used to analyse whether acquirer out performed non acquirer. However, Andrade, Mitchell, and Stafford (2001) and Healy, Palepu, and Ruback (1990) Joshi, 1991; Bhanu(2005); Reddy & Padma(2005); Selvem, Vanitha, & Babu (2005); Gangadhar & Reddy(2007); Mann & Kohli(2008) and Ramakrishna(2008) studies find improvements in financial performance based on accounting information Many other studies e.g., Agarwal & Bhattacharjea, 2006; Beena (2000); Pawaskar(2001); Dash, A. (2005); Bagchi & Banerjee, (2005); Gourlay, Ravishankar, & Weyman-Jones(2006); Mantravadi & Reddy(2007); Mallikarjunappa T. (2007); and Tambi(2007) finds no improvement in financial performance.

**Experts Survey**

This method is used collect first hand information from the group of people who have been part of M&A directly or those people who have been indirectly associated with M&A process such as Consultants ,M&A Legal firms ,Researchers & Academician.

A standardized questionnaire administered and these are asked respond to it. The opinion of these people may be generalized in order to draw some conclusion regarding the motives, success and failure of any M&A deal.

Further, M&A is one of the important strategic decisions taken by corporate firms, much of information such as the intention of acquirer do not finds in public domain. Therefore, this method is useful to make an in depth analysis of any M&A case.

Towers Parrein(2003) a survey report based on 132 senior executives worldwide concluded its finding –

Firstly. Over 70% respondents reports their M&A deals achieved targeted objectives, Secondly. The human capital before and during M&A deal is critical to success of deals ,and lastly they concluded that the success of M&A deals largely is depend on the capabilities of HR department . KPMG(1999) those companies that put priority on pre-deal synergy evaluation were 28% more likely than average to have successful deal

**Clinical Study (Case Study)**

A small sample or one case of M&A studied in depth. Jensen (1986)the purpose of 'case study' is to fill in the gaps left by studies of operating performance and market based study. According to Bruner (2004) 'Case Study 'methodology is an inductive form of research whereby researcher developed new insight.

The major references of 'Case Studies' methodology adopted is given follows

Table 1.14

| Article | Research aim/question | Research design + main Method references | Empirical context and length of study period | Main findings |
|---|---|---|---|---|
| Bresman, Birkinshaw & Nobel, 1999 (125) | To identify the factors that facilitate knowledge transfer in international acquisition and Identifying patterns of international knowledge transfer from the acquiring company to acquired company and vice versa in the post acquisition integration process. | Questionnaires and case studies, three longitudinal cases of acquisitions based on 219 questionnaires and 40 interviews (no method references) | Post-acquisition integration process, specifically knowledge transfer. three Swedish MNCs acquisitions of foreign companies, studied period 1988-1996 (8 years) | The knowledge transfer process in acquisitions is distinctly different from other modes of governance, due to the rapidly-evolving relationship between the two parties. In the early stages, knowledge transfer is relatively hierarchical but then gives way to a reciprocal process. Over time knowledge being transferred shifts from relatively articulate (e.g. patents) to more tacit |
| Buono, Bowditch & Lewis, 1985 (112) | Clarify our understanding of organizational culture | Multi-method approach, before, during and after | One case study, two banks merging studied from pre-merger 1979- | Hard organizational factors such as compensation, amount of working hours and training |
| | and its consequences for the merger process | merger, based on questionnaires, interviews, observations and archival data. Gutek 1978 | 1980, during merger 1981 and post-merger 1982 (4 years) | policies showed no significant differences on organizational climate before and after the merger. Instead it was the subjective culture, such as organizational commitment and attitudes towards top management, producing the differences. More management |

| | | | | |
|---|---|---|---|---|
| Ranft & Lord, 2002 (64) | Explore the process of acquiring new technologies and capabilities from other firms-with particular focus on the dynamics of knowledge transfer during acquisition implementation | Multiple case study research design for grounded-theory building and development of a conceptual model and propositions. Based on 17 interviews of high-level managers. Glaser and Strauss (1967). Eisenhardt (1989). Yin | Post-acquisition integration process, seven retrospective cases of high-tech acquisitions with the intention of gaining new technologies and capabilities. Studied period 3 years of post-acquisition integration process. | The transfer of technologies and capabilities to the acquirer is neither simple nor quick because of distinct acquisition implementation issues. Knowledge transfer is difficult within an existing firm and likely to be even more difficult in an acquisition context because, unlike in an existing firm, the acquirer and the acquired firm do not |
| Birkinshaw; Bresman; & Håkanson, 2000 (56) | What is the process through which an acquisition delivers on the value creation sought by the acquiring firm? | Case studies based on interviews and questionnaires, to study a small number of recent acquisitions in great detail. Miles and Huberman, (1984); Weick, (1989). | Post-acquisition integration process, 3 longitudinal cases of cross-border acquisitions by three Swedish MNCs. Studied period 1991-1996 (5 years). | The task integration process and acquisition success is mediated by the current performance level and the human integration already in place of the individual operating units. A low level of performance and a low level of human integration will limit the effectiveness of task |
| Rhoades, 1998 (52) | Do bank mergers, especially horizontal (in- market) mergers, yield efficiency gains? | Case study approach to provide insights into firm (industry) behaviour and performance through the use of a wide range of data and institutional detail from unique firm or industry sources. Analyzes of financial ratios and interviews with bank officials. | Post-merger integration efficiency effects. Nine retrospective large horizontal bank mergers. Studied period three years after the merger. | In all cases significant cost cutting objectives were achieved or surpassed fairly quickly; four of the nine mergers showed clear efficiency gains relative to peers; and seven of the nine mergers exhibited an improvement in return on assets relative to peers. |

| | | | | |
|---|---|---|---|---|
| Bastien, 1987 (47) | Linking acquiring company communication and behavior with acquired company employee motivation, retention, and communications | Case studies based on 21 interviews of acquired lower level and mid level managers. Merton et al. 1952 Yin, 1984 | Post-acquisition integration process, three retrospective cases of acquisitions around or some months after formal take-over. | In stressful situations such as merger or acquisition, communication is key to managing uncertainty in the acquired organization. If communication is inadequate in quantity, quality (formal or collegial), or congruence for the acquired organization, rumor mills, a decrease in productivity, and an increase in employee turnover can result. |
| Vaara , 2002 (46) | To study narratives of success and failure in the case of mergers and | Narrative approach, case studies based on 126 interviews with | Post-acquisition integration process, eight retrospective cases of | The study identifies four specific discourse types — 'rationalistic', 'cultural', 'role- |
| Greenwood, Hinings | acquisitions Empirically test the | high level and mid level managers. Czarniawska (1997 and 1999) A longitudinal case | Finnish-Swedish mergers and acquisitions. Studied period, circa one year after the formal merger. Post-merger | bound' and 'individualistic' — that the narrators employed when (re)constructing success/failure in the context of post-merger integration Contrary to Hypothesis 1, |
| & Brown, 1994 | hypotheses: H1. The | study of two similar | process involving a | attention was given |

| | | | | |
|---|---|---|---|---|
| (45) | courtship stages of the merger process are characterized by a concern for strategic fit to the neglect of organization fit. H2. Ambiguous agreements made during the early stages of a merger lead to a cycle of escalating conflict as ambiguities are clarified during the consummation stage | organizations whose members widely agreed to merge. Therefore appropriate to test the hypotheses in a situation where behavioral difficulties might be least expected. Based on some 220 interviews with partners and managers during the studied period. Eisenhardt, 1989; Van Maanen, 1979. | merger between two large accounting firms in Canada. Process studied from announcement of merger and four years unfolded. | throughout the merger process to the importance of organizational as well as strategic fit. In the present case the unfolding of the merger did reveal professional practice that were unanticipated in the negotiation stages, which confirms hypothesis 2. |
| Olie, 1994 (43) | To study merger integration in an international context and how a new viable entity can be created | Case study approach to allow for greater understanding of the dynamics present within a single setting. Based on some 60 interviews from both parties. Yin, 1984. | Post-merger integration process. Retrospective cases of three German- Dutch industrial mergers. Studied period 10 years. | A high degree of cohesion is fundamental in creating a joint effort to fulfill the goals of the new organization. Obstacles were identified which may hinder effective consolidation. These include firm-specific, industry-specific and country- specific differences such as different legal requirements, co-determination practices, political environment, management styles and sales traditions. |

| | | | | |
|---|---|---|---|---|
| Empson, 2001 (40) | Why do individuals resist knowledge transfer in the context of mergers between professional service firms? | Longitudinal and retrospective case studies (based on 177 interviews) in order to gain in-depth understanding of the complexities of the merger process, gather longitudinal data, triangulate data and combine multiple levels of analysis. No method reference | Post-acquisition integration process. Two longitudinal cases and one retrospective case study of mergers and acquisitions in accounting and management consulting, professional service firms. In all three cases the period studied was three years. | In the context of PSF mergers, individuals will resist knowledge transfer when they perceive fundamental differences in the form of the knowledge base and the organizational image of the combining firms. These perceived differences give rise to the twin fears of exploitation and contamination |
| Graebner, 2004 (40) | How do the leaders of the acquired firm influence value creation | Grounded theory-building, multiple case design with replication | Post-acquisition integrati on process, 8 retrospe ctive cases of | Acquired leaders are instrumental in creating two types of value, expected and |

| | | | | |
|---|---|---|---|---|
| | during the implementation process? | logic. Three data sources: interviews, follow-up e-mails and phone calls, archival data. Yin 1989; 1993; Eisenhardt, 1989; Strauss and Corbin, 1990. | acquisition in the ICT-industries. Based on 60 semi-structured interviews. Retrospective case studies six months after formal acquisition. | serendipitous. They create value in part by mitigating the potential conflicts between autonomy and integration. The most effective acquired leaders are able to foster multiple points of change within their organizations, including the completion of the acquired technology, the realization of planned synergies, and the discovery of unexpected sources of synergy. |

Source: Lars Bengtsson & Rikard Larsson(2012)

The advantages & disadvantages of each methodology of research used in this study has been discussed as follows

Table 1.15

| Dimension | Event Study | Accounting Study | Case Study | Survey Based |
|---|---|---|---|---|
| **Basic Approach** | Capital Assets Pricing Model used to calculate 'abnormal return' shortly after M&A announcement | Return on equity; return on assets over a multiyear period used to measure improvements in financial performance | In- depth analysis of a few cases of M&A to determine if M&A objectives were met | Managers involve M&A are asked t rate the success oi deal |
| **Strenght** | Efficient Market Hypothesis; unbiased rational expectation of future cash flows; extraneous factor eliminated ; data publicly available | Permits a multiyear perspective reflecting belief that it may take years before merger benefits are realized ;data publicly available | A more robust and fine grained understanding of the drivers of M&A success or failure | Recognizing the complexity and multidimensional nature of measuri M&A success |
| **Weakness** | Assumption that the market participants are able to quickly and accurately calculate cash flow impact of M&A | Reflects the past ,not the future ;no adjustment for changing risk profile ;factors other than M&A may be driving the numbers | Small sample size ;inability to generalize to other situation ;possible researcher bias | Self reporting bia |
| **Copclusion** | At best a 50/50 bet for acquiring firms shareholders ;mixed results on related vs unrelated performance ;M&A theory not empirically supported | Same as 'event study; | The due diligence process ,price paid and management of integration all must be deftly managed to ensure M&A success | |
| **Recommendation** | Beware of overpaying | | Be prepared to "walk away";be clear on source of synergy ;manage the integration process | Retain top management of th acquired firms regardless of weth it is related or congolomerate merger |

Source: Cording, Margaret, Petra Christmann, and L. J. Bourgeois III (2002)

**Conclusion**: On the basis extensive literature survey it can be concluded that the first; M&A is multidimensional and multistage phenomenon. The different stages of M&A process and expected benefits to the functional domains are need to be analyzed in terms of key consideration kept or expected to be kept in their views by the managers while they go for undertaking any M&A activities. Second; the M&A is a complex phenomenon, therefore, the success and failure of it should be analyzed using an integrative approach including quantitative and qualitative data.

These variables are identified on the basis of literature survey of the research conducted across the different industries need to be in the context of current study

Therefore, next two chapters are devoted to analyze, first; the M&A in India in general way followed by the overview of Indian Pharmaceutical Industry.

# Chapter-2

The previous chapter was devoted to understand the research paradigm of M&A and the empirical evidence of M&A research found at global level .Since the context of the current research is Indian Pharmaceutical Industry, therefore, the present chapter is an attempt to understand overview of M&A cases found in India in general and the next chapter is devoted to take overview of Indian Pharmaceutical Industry in particular.

## Corporate M&A in the Indian Context

### Introduction

Prior to the advent of second generation reforms (1991) in India, only two major cases of M&As are reported: one the merger of Bengal Iron and Steel Co with Indian Iron & Steel Co Ltd in 1936 and second the takeover of Pukhuri Tea Co Ltd by Bishnauth Tea in 1965. Before 1991, several companies indulged in unrelated diversifications owing to the licensing policy that manipulated industry entry and exit barriers for a select few. For example, before1994, the Murugappa Group, the Chabbria Group and the RPG Group sought to build conglomerates through acquisitions in indiscriminate domains. During the period 1980-1993, the Murugappa group acquired twelve companies in diversified sectors like fertilizers, pesticides, sugar, ceramics, sanitary ware, cutting tools, metal section, chain, plantation and abrasives. In reality, many of those firms with a favour could survive despite their incompetencies as the total capacity of the industry was restricted and there was virtually no competition either from outside or inside. The NIP, 1991 and subsequent changes in the regulations threw open the economy to fierce internal and external competition. This was further accentuated by recessionary trends, leading to fall in demand, which, in turn, resulted in diseconomies in several sectors.

### Waves M&A In India

Hence, provisionally although the first wave of corporate deal making in India unfolded in the 1980s with the initiation of the first generation reforms under Mr Rajiv Gandhi and the birth of large-scale corporate ambition that saw the first corporate raiders namely, bigwigs like Sawaraj Paul, Manu

Chabbria and R P Goenka. However, technically the second wave of M&As started during 1992-95. As it was largely marked with corporate restructuring process. The conglomerates that had built expansive and unrelated business portfolios in the pre-liberalised era, were now forced to sell off non-core businesses that could not cope up with the rising competition.

The third wave came up during 1997-2002. There was a round of consolidation in key sectors like cement and telecommunications. A new type of deal also made its presence felt—venture capital. Money poured into starts ups, especially in technology and IT services. However, many start ups could not survive leading to M&A activity in the IT arena.

The fourth wave (2004-2006) till date: witnessed a flurry of global deals. Private equity investors and MNCs got bullish about India during this period. Overseas acquisitions by Indian companies also gained prominence.

In the entire process of economic change, as evident from above mentioned facts the regulatory factor facilitating economic changes and the M&A norms probably played the most significant role. A brief reference to those changes would agree with the context at this place. A significant change happened in 1994 when the necessity for formulating a new takeover code was felt by the regulatory authorities. As a matter of fact the policy and regulatory framework governing M&As evolved over the 1990s. Before 1990, an open offer was mandatory for acquiring 25 per cent stake in a company. In 1990, this threshold was reduced to 10 per cent of the company's capital. As a part of the package of reforms and policy liberalisation, the government announced the New Industrial Policy (NIP) in July 1991. NIP accorded a more liberal attitude to FDI inflows. Further, FERA restrictions on foreign ownership in Indian companies were abolished and the requirement of prior government approval on M&A was removed. In 1992, the Government of India created the Securities and Exchange Board of India (SEBI) with powers to regulate the Indian capital market and to protect investors' interests. In November 1994, with a view to regulate takeovers, SEBI promulgated the Substantial Acquisition of Shares and Takeover (SAST) Regulation Act, which was modelled closely along the lines of the UK City Code of Takeovers and Mergers. The revised SAST

Regulation 1997 was amended in 2002, 2004 and 2006. The latest amendment in 2006 was meant to facilitate M&As and help companies to restructure themselves to achieve greater economies of scale, and to compete in the global market.

According to Mckinsey data, the M&A activity increased by approximately 110% in 2000 with respect to the previous year. The value of M&A activity increased by 151% in 2004 compared to the previous year. The percentage change was 103% in the year 2005 compared to 2004. The value of M&A deals peaked in 2007. According to Grant Thornton report the value of M&A activity increased approximately 7 times in the year 2005 compared to the year 1998. India emerged as one of the top three markets in Asia, with total deals estimated to have crossed the $20 billion mark, against $10 billion in 2004. During the last 30 years, M&A activity has shown an increasing trend. During the earlier period, numbers of mergers were more compared to acquisitions. But post-liberalisation, number of acquisitions are substantially larger compared to mergers, with manifold increase in acquisitions in the post-1999 period. This can be attributed to the reform aspects in the takeover regulations. Besides, private equity investors, already known globally for facilitating strategic deals, have arrived with a bang in India too, and have been funding M&A events. Over 100 private equity houses are operating in India and have raised, on an average, about $100 million. They form a major force in the Indian market, resulting in more M&As as they seek to achieve significant value growth within their investment horizon.

## Mega M&A Deals in India

Table 2.1

| Year | Deal | US$ Billion | Description |
|---|---|---|---|
| Jan 2007 | Tata steel -Corus | 12. 2 | Tata Steel purchased a 100% stake in the Corus group @ 608pence/share; all cash deal |
| Feb2007 | Vodafone-Hutchison Essar | 11. 1 | Vodafone bought the controlling stake of 67% held by Li ka Shing Holdings in Hutch Essar |
| March 2010 | Bharti-Zain | 10. 7 | Bharti entered into a legally binding definitive agreement with Zain to acquire the sale of 100% of Zain Africa BV. its African business excluding its operations in Morocco and Sudan, based on an enterprise valuation of USD 10. 7 billion. Under the agreement, Bharti will acquire Zain's African mobile services operations in 15 countries with a total customer base of over 42 million |
| Feb 2007 | Hindalco-Novelis | 6 | Aluminium and copper major Hindalco industries, the Kumar Mangalam Birla-led Aditya Birla Group flagship, acquired Canadian co Novelis Inc in a 6 billion, all cash deal. It made Hindalco a global leader in aluminium rolled products and one of the largest aluminium producers in Asia |
| June 2008 | Ranbaxy-Daiichi Sankyo | 4. 5 | The largest ever pharma deal in India. Japanese drug firm Daiichi acquired the majority stake of more than 50 per cent in Ranbaxy. The deal created the 15th biggest drug maker globally |
| Jan 2009 | ONGC-Imperial energy | 2. 8 | ONGC acquired 96. 8% of the London's listed firm shareholding |
| Nov 2008 | NTTDoCoMo-Tata Teleservices | 2. 7 | Japanese telecom giant NTTDoCoMo acquired 26%stake in Tata Teleservices;with a subscriber base of 25 million in 25 circles, the company paid Rs 20107 per subscriber to acquire the stake |
| Feb 2008 | HDFC bank-Centurion bank of Punjab | 2. 4 | HDFC bank have approved the acquisition of Centurion Bank of Punjab for 9510 crore ($2. 4 billion) in one of the largest mergers in the financial sector in India. The target's shareholders got one share of HDFC Bank for every 29 shares held by them. Post acquisition, HDFC Bank became the second largest private sector bank in India |
| March 2008 | Tata Motors-Jaguar deal | 2. 3 | Tata Motors acquired auto giant Jaguar and Land Rover from Ford Motor |
| May 2008 | Sterlite-Asarco | 1. 8 | Sterlite, the Indian subsidiary of London based Vedanta Resources Plc acquired Asarco |
| May 2007 | Suzlon-RePower | 1. 7 | Wind power major Suzlon acquired the German wind turbine manufacturer RePower. It is now the largest wind turbine maker in Asia and fifth largest in the world |

| | | | |
|---|---|---|---|
| March 2009 | RIL-RPL Merger | 1. 68 | RIL approved a scheme of amalgamation of its subsidiary Reliance Petroleum with the parent company. The merger became effective from April 1. 2008, the RIL RPL Merger swap ratio was @16:1 |

Source: Different Issues of, Business Standard, Economics Times and Hindu Business Line

## Overseas M&A and Indian Firms

Owing to fast industrial reforms in India particularly post 2001 not only M&A deals could get accelerated internally but Indian firms have also gone global. According to Grant Thornton Deal Tracker annual issue, 2011 inbound deals in India dominated till 2006, but the number of outbound deals have outnumbered inbound deals since then. For example, the value of inbound deals increased marginally from \$5, 173. 93 million in 2005 to \$5, 399. 75 in 2006. But the value of outbound deals increased substantially from \$4298. 52 million in 2005 to \$9914. 15 million in 2006, representing an increase of 130 per cent. This fact clearly indicates the emerging trend of Indian companies going on an acquisition spree as a strategic pursuit for growth (Bloomberg, India Business and Investment Report, 2006).

Following are some recent major inbound deals:-Kohlberg Kravis Roberts' acquisition of the software business of Flextronics for \$900 million. -The Texan major, Electronic Data System, acquired Mumbai based Mphasis BFL for \$380 million. -In the telecommunication sector, Vodafone acquired Hutchison's stake in Essar Telecom for \$19 billion.

**Following are some of the major outbound deals:**

**Table: 2.2**

| Acquirer | Target | | Description |
|---|---|---|---|
| Tata Steel | Corus | \$13000 m | UK; all cash deal; gained status of the world's sixth largest steel manufacturer; reduced its risk to fluctuating prices; 2007 |
| Tata Steel | Nat Steel | \$298 m | Singapore |
| Tata Tea | Tetley | \$430 m | Uk;foothold in the UK market |
| Tata -Tetley | Glaceau | | foothold in the US market;2001 |
| Tata Tea | Energy Brands Inc | \$677 m | US; acquiring 30 per cent stake;2006 |

| | | | |
|---|---|---|---|
| Tata Coffee | Eight 0 Clock | $220 m | A buyout: a hundred year old American brand & the third largest coffee chain in the US |
| Tata Motors | Ford Motor | $2300 m | Acquired Jaguar and land Rover from Ford;2008 |
| Tata Motors | Daewoo Motors | $118 m | Korea |
| Tata Power | PT Kaltim Prima Coal | $1100 m | Energy |
| VSNL | Tyco International | $130 m | US: Access to trans Atlantic, trans Pacific and inter American cables |
| VSNL | Teleglobe International Holdings | $239 m | Buyout: foothold in the international voice market, estimated at about 220 billion minutes per annum;2005 |
| Reliance | Flag Telecom | $211m | US; telecom |
| Reliance | Flag Telecom | $207 m | Bermuda: telecom |
| Bharti Airtel | Zain | $10, 700 m | South Africa:telecom:2010 |
| Hindalco | Novelis, Atlanta | $6000 m | aluminium sector;2007 |
| Suzlon Energy | Repower systems | $1700 m | Germany;Energy:2007 |
| Suzlon | Hansen | Euro 431. 43 m | Belgian gearbox maker; funded entirely by debt from the ICICI Bank, the SBI, Deutsche Bank and Barclays Bank;2006 |
| Essar Group | Algoma Steel Inc | $1600 m | Canada; Steel sector |
| United Spirits | Whyte & Mackay | $1200 m | UK; Distillery |
| ONGC | Sakhalin Oil & Gas Fields | $1, 700 m | Russia;2002 |
| ONGC | Royal Dutch/Shell | $660 m | Angolan units;2002 |
| ONGC | Oil Field, BC-10 Block | $1400 m | Brazil |
| ONGC (through ONGC Videsh Ltd. ) | Omimex de Columbia | $425 m | US |
| Aban Lloyd | Sinvest ASA | $446 m | Norway ;Oil drilling; 33. 76 % stake later increased to 97% for $ 774 million |
| Dr Reddy Labs | Betapharma | $571 m | Germany's fourth largest generic company, 2006 |
| Ranbaxy | Terapia | $324 m | Romania;(96. 7 % buyout); access to high growth markets in generics in Eastern Europe;2006 |
| Ranbaxy | Aventis | $70 m | France |
| Matrix Lab | Docpharma | $ 263 m | Belgium; acquired 22 per cent stake |
| Sun Pharma | Taro Pharma | $454 m | Israel |

| | | | |
|---|---|---|---|
| Videocon | Daewoo Electronics | $730 m | Consumer electronics |
| Videocon Industries | Thomson S A | 1, 260 crore | France: became the third largest colour picture tube manufacturer in the world |
| ICICI Bank | Investitsionno Kreditny Bank | | Russia |
| SBI | Mauritius Bank | | |
| Bank of Punjab | Centurion Bank | | |
| CLSA Merchant Bankers | Standard Life of TJK | Rs 1, 010 crore | Standard Life of TJK sold off its 4. 9 per cent stake in HDFC to CLSA Merchant Bankers |
| GHCL | Rosebys | $40m | UK |
| UCAL Fuels | Amtec Precision Products Inc, | $28 m | US; Manufacturing; auto ancillary products |
| Bharat Forge | CDP | $157. 5m | Germany |
| Bharat Forge | Imatra Kilsta AB | $261 m | Sweden; forging |
| Jian Irrigation | Dan Irrigation | $ 17. 50 | Israel |
| Crompton Greaves | Pauwels, Belgium | | Engineering firm: turned around post purchase in May 2005 |
| L&T | Tamco Switch Gear | $108 m | Malaysia |
| Ashok Leyland | Defiance Testing | $ 17 m | US |
| Indian Hotels | Hotel Campton Place | $63 m | US |
| Himmatsingka Seide | Giuseppe Bellora Spa | $21. 7 m | Italy |
| Weispun | Christy | | UK; Turned around the terry towel brand post purchase in 2006. |
| Amtek Group | Zelter | $157. 5 m | Germany |
| Subex Systems | Azure Solutions | $140 m | UK |
| Subex Azure | Syndesis | $164. 50m | US |
| Infosys | Expert Information | $23 m | Australia |
| Wipro Ltd | Infocrossing Inc | $557 m | US:IT sector;2007 |
| Wipro Ltd | Nerve Wire Inc | $18. 7m | US |
| Wipro | Unza | $275 m | FMCG |
| BILT | Sabah Forest | $261 m | Malaysia, paper |

Source: Different Issues of, Business Standard, Economics Times and Hindu Business Line

Tata Group's Tata Tea began the trend in cross border acquisitions when it acquired UK's famous brand, Tetley Tea, for $430 million in 2001. A number of factors have been cited as facilitators to cross border acquisitions; fast economic liberalization, lifting of restrictions from exports, easy availability of dollars, changing mindsets of Indian corporate, access to debt for acquisitions in the west from US and other global private equity firms. The recession in the US and the European economy has also attracted Indian firms towards foreign acquisitions. The overseas M&A activities got further momentum, also when the Government of India removed the $100 million cap on foreign investments by Indian companies and raised it to the net worth of the companies.

The IT and ITES sector, banking and financial services and pharmaceutical companies have been most active in M&A deals. A host of mid and small cap firms in industries ranging from textiles, consumer durables, fast moving consumer goods and telecom to energy, automobiles, auto components and information technology are also participating in the outbound deals. Indian companies are targeting different geographies for different sectors. For pharma and auto components, Europe is the major destination. Metal and mineral sectors are being targeted in the Asia-Pacific region. IT& ITES and telecom space acquisitions are taking place in the US markets. The biggest portion of Indian M&A activities have been in Europe (around 40 per cent) and North America (around 34 per cent) highlighting Indian companies' confidence in investing in more developed economies. (Grant Thornton Report 2006)

**A Few Sectoral Overviews of M&As**

**IT & IT Enabled Services**

The M&As in the industry are driven by scale of economies, price pressure, consolidation and building up offshore capabilities to strengthen verticals or domain expertise and to acquire overseas customers. Major events include: Infosys acquired Expert Systems in Australia. Wipro bought the energy and utilities divisions of AMS and Nerve wire in the US. Cognizant purchased Info pulse in Europe and Ygyan in India. EDS's acquisition of majority stake in Mphasis BFL(2006), RR Donnelley's acquisition of Office Tiger(2006), i-Flex's acquisition of Mantas Inc (2006). M&As in the ITES sector have become quite frequent owing to getting quick entry into this segment through acquisitions and getting a customer base overnight especially in high margin niche segments. such as healthcare and market research. They also focus on the technical know how to improve the processes and front end teams. On the other hand, foreign companies acquire Indian BPOs for their skill and manpower. The ever-growing market for back end jobs is one of the reasons for the acquisitions.

**Telecommunication Industry**

Noticeable events include: Formation of Birla-Tata -AT&T consortium. Tata's acquisition of VSNL Ltd. VSNL later bought Tyco Global Network and Teleglobe International Holdings (2005) for a global access. Reliance Infocomm also purchased Flag Telecom to get an access to Europe. The US. Maxis Group's acquisition of Aircel (2005). Vodafone's investment in Bharti's TeleVentures (2005). Essar Group's acquisition of BPL Communications (2005). However, the acquisition of Hutchison's share (67%) in Essar by Vodafone (now Vodafone Essar) was the largest ever act of consolidation in the industry (2007).

**Media and Entertainment**

The restraints in the media industry include lack of corporatization of the sector due to ambiguous government policies regarding production, distribution, and exhibition and recycling of films. Besides, there is a need to cope up with aggressive advertising and market growth. Major M&A events: TV18 purchase of 46 per cent stake in Jagran TV in 2005, now called IBN-7. Network 18 purchase of 50 per cent stake in MTV, VH I and Nickelodeon (2007). Zee TV's acquisition of stakes in ETC networks and Padmalaya Telefllms. Nine networks merged into Balaji Telefllms. The acquisition of a 26 per cent stake in the Rajan Raheja owned Hathway Cable & Datacom in 2000 enabled re-entry for StarPlus into cable network, which has around one million subscribers. Zee hived off its news and cable related businesses (Siticable) into independently listed companies. However, Zee and Zee Cinema continue to have their separate entity and agenda under ZTL. SAB TV was hived off from the old firm, Sri Adhikari Brothers, to a separate holding company, SAB TV Network. But investment of US$259 million in 2007, by Temasek in Inx Media, a TV broadcast company is deemed one of the biggest deals in media industry so far.

**Banking Sector**

The banking in India has diversified from the traditional banking into corporate banking, foreign exchange business, personal banking, retail finance, mutual fund asset management, wealth management, structured finance, mortgage finance, consumer finance and credit cards inter alia. However, M&A activities in this sector have been mainly driven by RBI directives to merge ailing PSBs with bigger public sector banks. Very few M&As are based on market expectations. For instance, the merger between Standard Chartered Bank and Grindlay's Bank; HDFC Bank's takeover of Times Bank; It has also takenover Centurion bank of Punjab (2008); the acquisitions of SCICI (1996), Anagram Finance(1998), ITC- Classic(1997), Bank of Madura(2001), and reverse merger with ICICI(2002) by ICICI is of practical interest. On the other hand mergers between some banks have gone awry due to high NPAs. For example, PNB-New Bank of India (193-94). Banks like SBI have created a hedge in the market and trying to pre-empt any acquisitions by spreading out geographically through its more than ten thousand branches locally and worldwide.

**Food and Beverages Industry**

The events in F&B in India are set by a few players who post I 990 have grown and consolidated inorganically in the market such as Breweries Group, the leading player in the Indian spirits market whereas players in tea production like The Williamson Magor Group and Tata Tea-Tetley seek competitive advantage through creating huge volumes with lowest possible cost structure. It is to be noted here that The McLeod Russel acquisition made Williamson Magor Group the world's largest private tea producer, while the Tata Tea-Tetley deal has created a perfect strategic fit between the two firms. Scope for further M&As in the fragmented liquor business can't be ruled out in the near future.

**Oil and Energy**

Volatility in petrol prices worldwide has coerced players in the fray into combining their mutual competencies in such a way that they remain competitive in their respective markets. For instance, mergers between RPL and RIL (2002), Tata Power Company's acquisition of Tata Petrodyne, merger of IPCL into Reliance, ONGC's acquisition of Sakhalin Oil Gas and Royal DutchlShell in 2002, acquisition of IBP by Indian Oil Corporation.

Reliance Group acquired BSES and renamed it as Reliance Energy. The merger of Kochi Refinery Ltd into BPCL was meant to provide greater stability to BPCL's earnings in times of higher refining margins and pressures on marketing margins.

**Cement**

The industry is characterised by crests and troughs of seasonal business cycle therefore, due to slowdown in the 90's, firms with low economies of scale, low operational efficiencies, poor logistics and poor geographical spread were takenover by the stronger firms. The takeover of Raasi Cements Ltd and Shri Vishnu Cements Ltd by India Cements Ltd marked the era of consolidation in the unevenly distributed cement industry. However, later due to boom in infrastructure activities, many global cement majors, like Lafarge (France), Holcim (Switzerland), Italcementi (Italy) and Heidelberg (Germany) have also entered the market by means of M&As, joint ventures and green field projects. Holcim has increased its holding in Ambuja Cements from 2 per cent to 56 per cent(2007) and 12 per cent in ACC Cement. Grasim Industries have also bought 38. 5 per cent stake in L&T Cemco (2003). In the near future, consolidation of capacities through M&As will be the trend.

**2.5: Macro and Micro Reasons behind Indian M&As**

Growing GDP and FDI, falling rates of interest, progressive regulatory policies and maturing capital markets creating private equity investment opportunities are key macro facilitators for M&A.

India has seen 6% annual growth rate over the last two decades, offers great investment opportunities in both old and the new economy. Service has been the main sector driving growth for the economy, with 8% plus growth. According to AT Keamey's FDI Confidence Index, India is the second most attractive destination for manufacturing. According to UNCTAD's World Investment Report 2005, India' is the second most attractive investment destination among transnational corporations. Industrialisation has brought in more competition, tariff reductions, income velocity and financing. The new avenues and engines of growth are IT/ITES, telecom, financial services, healthcare, pharmaceuticals, biotechnology, education, real estate, infrastructure, toll roads, bridges, cement, organised retail, tourism, gems and jewellery, manufacturing and aviation.

The relaxation in regulations proposed automatic approval for Indian companies for investing upto 200% of their net worth abroad. The key features of the policy include: Ease in accessing funds through Extemal Commercial Borrowing (ECB) and Foreign Currency Convertible Bonds (FCCB); an increase in FDI from 24% to 49% in insurance sector;100% FDI permitted in urban infrastructure projects, and in development of integrated townships, including housing, commercial buildings, hotels and resorts;100% FDI permitted in heavy electrical industry;100% FDI permitted in power generation (except for atomic energy), transmission, distribution and trade;FDI of up to 74% permitted in telecom services companies, in basic, cellular unified access, national/international long distance, V-SAT, public mobile radio trunked services, global mobile personal communications services and other value-added telecom services (Kapur R, KPMG Report, 2007)

There are several ways to invest in India. Basically investment can be made through a financial investor (FIIs or FVCI). The other alternative is to be a strategic investor (FDI). Investment through a financial investor may be by (a) Investment in a US company, with a service fulfilment subsidiary in India, (b) Investment in a Caymans or Mauritius company, with a service fulfilment subsidiary in India, (c) Direct investment in an Indian company outside India, (d) Direct investment in an Indian company from outside India, through a venture capital fund registered with SEBI. The strategic investor may also adopt the route of a foreign company, with branch, liaison or project office in India. There is also the scope of operating as an Indian company, with joint ventures or a wholly-owned subsidiary in public or private partnership.

More debt and capital is available for companies to put together mega sized deals. The spurt in commodity and asset prices has left more cash with corporate and investors, which is available to fund transactions. The entry of private equity and the presence of intermediaries, like investment bankers, have also facilitated M&A activity by negotiating with buyers and sellers. Besides, product markets have become global in every sense of the word.

Companies need to offer services across geographies to compete effectively. Another important macro factor driving M&A activity is the changing role of financial institutions in India. The proactive approach of financial institutions has forced many corporate to sell their loss making businesses.

**Studies on Motives behind M&As in India**

Growth and expansion of business capacities is on of the major motives of Indian companies behind M&A activities. The conducive regulatory and macroeconomic parameters at home and scope for growth in an internationalized economic system function as a catalyst to achieving growth objectives. In 200I, there were 1634 inbound M&A activities in India, while the outbound activities were only 40. By 2006, the number of outbound M&A activities rose to 6361. The largest outbound deal was the acquisition of Corus by Tata Steel for an estimated S12 billion (2007). This fact clearly indicates the emerging trend of Indian companies going on an acquisition spree as a strategic pursuit for growth.

The pattern analysis of M&As (both domestic and overseas) by Indian companies indicate couple of more attendant motives. That the growth and expansion is being sought as a means to build or further strengthen core business competencies (e. g. , purchase of Tetley, Energy Brands Inc and Glaceau by Tata Tea or Bharti's acquisition of Zain, 2010) and the acquisitions(such as Raasi Cements Ltd and Shri Vishnu Cements Ltd by India Cements Ltd) or mergers (e. g. , RIL-RPL, 2009)are also aiming at cost savings through enhanced economies of scale.

The conglomerates such as the Tatas and Reliance among many others use M&As for safe unrelated diversification as well (e. g. , Tata Steel-Corus and Tata Tea-Tetley or Tata motors-Daewoo motors)

Owing to the fragmented nature of many industries in India, many firms are restructuring and aiming at consolidation through M&As (Sudarasanam, 2003). In many sectors like cement, pharmaceuticals, software, paper & packaging small and niche players have key skills but are struggling due to lack of capital while in other sectors, firms have created capacities in unrelated businesses that they are unable to carry profitably in the wake of business slowdown or fierce competition against firms with core competencies in the relevant domains. Hence restructuring leading to consolidation is a major trend and driver for M&As. For instance, sick subsidiaries seek amalgamation with the parent company. Consolidation along the line of core business principle is also done to attain balance sheet size and net worth to mount strategic takeovers of companies in similar business activities or at least defend oneself. Mergers of subsidiaries with the parent also helps streamline shareholding in other group companies.

Many M&As also happen for tax advantage (setting off losses against profits), tactical advantage (to avoid paying the sales tax at multiple stages in the production process) or outright distress. Other motives include enhancing of existing product portfolio/service offerings. Enhancing market share through customer acquisitions for accessing state-of-the-art technology and production processes (Sudarasanam, 2003).

**Types and Modalities of M&As in India**

**Select Cases of Mergers**

Companies in India are also adopting the technique of splicing their operations with the objective of getting more focused.

The classical example of a horizontal merger was that of the two steel giants, Arcelor and Mittal, who merged to form Arcelor-Mittal. Also the RIL-RPL merger of 2002; the largest ever merger in Indian corporate industry; it's India's only world scale fully integrated energy company, with operations ranging from oil and gas exploration, production, refining and marketing of petrochemicals, power and textiles; one of the advantages of the merger was the huge depreciation cover from RPL. It helped RIL to insulate its petrochemicals business against price volatility in naphtha. The merger was meant to create huge amounts of cash flows every year. The merger of Nocil with Polyolefins Industries was a vertical merger with backward integration for raw materials. ICICI Ltd. and ICICI Bank merged to create India's first universal bank. ASEA merged with Hindustan Brown Boveri to form ABB Ltd. The four CI companies—Crescent Dyes, Chemical & Fibres, Alkali & Chemicals and Indian Explosives—merged into one giant conglomerate, EL, which was later named as ICI India Ltd. The case of Indo Gulf Fertilizers and Birla Global Finance versus Rayon was one of the major consolidation acts through merger route in India. It created a company that captured opportunities in the evolving Indian economy through leadership in focussed value businesses, viz., Carbon Black, VSF, and Textiles and Fertilisers, and driving high growth businesses, viz. , Garments, IT/ITES, Financial Services, and Telecom. Indo Gulf merged also its copper business with Hindalco. Post restructuring, Hindalco emerged as one of the largest private sector companies in India.

**Select Cases of Friendly and Hostile Takeovers**

Studies also differentiate between **friendly and hostile takeovers**. The Sterlite- Indal case was reportedly a hostile takeover. The payment was proposed to be made in stocks. But the stock prices of Indal had gone up to Rs 170 in June'98 from Rs 66 in February'98 due to stimulated market for corporate control hence once the open offer ended, the stock again receded to the Rs 60 level leaving the shareholders in a position of loss. Takeover of Raasi Cements by India Cements (1998-1999) was also supposedly a hostile bid. In this case though India Cement paid around 70 per cent above the then prevailing market price of Raasi Shares however, ICL gained in terms of cost savings, economies of scale, more market shares, strong verticals, reduction in freight and consolidation in the Southern market. HLL acquisition of TOMCO (1992-93) and Glaxo and Wellcome Burroughs in 1996 are also deemed hostile takeovers on the ground of HR and cultural issues.

Examples of successful takeovers include IBM's acquisition of Daksh, the purchase of BSES by Reliance, and the Tata takeover of Corus. In an all cash deal, Hindalco acquired Indal in 2000. In 2007, British telecom giant, Vodafone, bought up 67% Hutch Telecom International (HTIL) stake in Hutch-Essar at an enterprise value of $19. 3 billion (approx Rs 86, 000 crore), which comes to $794 per share.

**Conclusion**

On the basis of extensive survey of M&A cases, across all Indian Industries, discussed in this chapter it can be safely conclude that the Indian M&A's major features are not different from the global M&A cases. Almost, all major industries including IT & IT Enabled Services, Banking, Cement, Telacommunication, etc undertook M&A strategy for growth and diversification.

# Chapter-3

# Indian Pharmaceutical Industry

## Introduction

The context of current study is to make an analysis of M&A in Indian Pharmaceutical Industry .So, the present chapter is devoted to take an overview of Indian pharmaceutical companies to understand the nature of industry in order to analyze M&A cases undertaken by Indian firms.

## Merger & Acquisitions in Indian Pharmaceutical Industry

M&A by Indian pharmaceutical companies seem to be part of strategic long-term need. M&A in pharmaceutical industry is becoming increasingly important for exploring newer markets and products for future growth.

The M&A undertaken by major pharmaceutical firms in India

### Ranbaxy

In 1995, Ranbaxy entered the US market by buying Ohm Labs. In 2004, Ranbaxy Laboratories acquired RPG Aventis from Aventis Pharma.. In 1999, Ranbaxy bought out Bayer's generics business, Basics GmbH and Proctor & Gamble's hypertension drug, Veratide, for $5 million. In order to increase its size and consolidate its market position, Ranbaxy acquired GSK (Italy), Terapia (Romania) and Ethimed (Belgium). Belgium baised Ethimed's business is focused on Benelux. Terapio has 157 marketing authorisations and strong broad-based product portfolio. About 70% of its products are focused on the central nervous system, musculoskeletal diseases, and 30% are focused on cardio-vasculafl system. The acquisition of Terapia was significant for Ranbaxy as 30% of its products were registered in 15 countries in Europe, and CIS (Commonwealth of Independent States), including Russia, Ukraine and Poland, were important markets. Ranbaxy aims to have a strong manufacturing presence in Romania, once |the country enters the European Union.

### Dr Reddy's

In 2000, Dr Reddy's Lab merged with the group company, Cheniinor Drugs Ltd, and the ailing Chennai based lerican Remedies Ltd (ARL). This consolidation made DRL the third largest pharmaceutical company in [ the country, after Glaxo and Ranbaxy. with interests in branded finished formulations, biotechnology and diagnostics.

Dr Reddy's had a 15-year exclusive agreement for product development and marketing of the over-the- counter drugs with California based Leiner Health Products. The agreement included: an exclusive marketing partnership with Leiner to distribute OTC products, a comprehensive Rx-to-OTC product pipeline. development of innovative private label OTC products and establishment of an executive steering committee to manage product development. The agreement came to an end in 2003.

DRL has also grown through brand acquisitions. It bought brands like Riflux and Clamp from the ailing SOL

In 2004, Dr Reddy's Lab acquired the US company, Trigenesis, specialising in dermatology, for $11 million (Rs 50 crore) as part of their strategy for differentiation. Trigenesis has a technology platform to make a new drug delivery system for dermatological products. which is a $6 billion market in the US. It has no drugs in the market, but holds licences for products being developed by other companies. Dermatology

In December 2005, DRL acquired Roche Pharma of Mexico for $59 million for custom pharmaceutical services.

In 2006, Dr Reddy's Lab acquired Betapharm, the fourth largest German generic pharma company, fo an enterprise value of Euro 480 million, or about Rs 2500 crore, in cash. DRL acquired 100% stake in the all cash deal. This is the largest acquisition by an Indian company in the pharma sector.

Panacea Biotec has signed a marketing arrangement with Dr Reddy's Lab, which will distribute Nimulid (Panacea's brand of nimesulide) in transgel form in Russia.

In 2008, Dr Reddy's Lab completed three acquisitions, Dow pharma's small molecules business from Dow chemical Company, BASF's pharmaceutical contract manufacturing business and of Jet Generici, a company that sells generic finished dosages in Italy. The acquisition of Dow Chemical Company's small molecules business, associated with the two UK sites, includes the relevant business, customer contracts, associated products, process technology, intellectual property and trade marks

**Sun Pharma**

Sun Pharma began operations on a small scale in Vadodara in 1991-92. It became public during the period, 1992-1993. In 1995-96, the company acquired M J Pharma and Gujarat Lyka, and started research activities for the US market. In 1997, the company acquired US based Caraco, a loss making generics company. During 1998-1999 the company acquired Tamil Nadu Dhadha Pharma, Natco Pharma and Milmet Laboratories.

Sun picked up 36.5% in the loss-making US company Caraco for $7.5 million in 1997-1998. Sun Pharma raised $350 million through convertible debentures and bonds from markets overseas to fund acquisitions primarily in the US. It hiked its stake to 63% in Detroit based, Caraco Pharma. After the acquisition, Caraco notched up $45.5 million in revenues and $11.2 million in net income. In 2004 Sun Pharma paid a modest $23 million from its $400 million reserve for assets of a bankrupt US healthcare company, Able Labs. Out of the 40 products of Able, Sun acquired two brands. In 2005, the company bought manufacturing facility in Hungary and Ohio from Valentant Pharmaceuticals. Sun bought the Hungarian factory to facilitate production of psychotropic drugs whose import into Europe and US is tightly regulated.

**Nicholas Piramal**

Nicholas Piramal has taken the inorganic route of acquisitions for its strategic pursuit of growth. The failure of Piramal Group to reap benefits in textile sector made it turn its attention towards the pharma sector. It began with the acquisition of Nicholas Laboratories from the Sara Lee Group in 1988. Since then, the group has grown through acquisitions. In 1993, the company acquired Roche, products and in 1994, Sumitra Pharmaceuticals. In 1997, Boehringer Mannheim was acquired. The Research and Development division of Hoechst was acquired in 1998. Rhone Poulenc was acquired in 2001. In 2002, the phaimaceuticals division of ICI was acquired. NPIL has a presence in practically all major therapeutic categories—antibiotics cardiovascular, gastrointestinal and dermatology. The three way merger of Nicholas Piramal with Piramal Healthcare and Boehringer took place in 1996. The company acquired Global Bulk Drugs in 2003. Takeovers, alliances and joint ventures gave NPIL access to technology and products. There have been several OTC products distribution joint ventures, such as Reckitt Piramal for products like DettoJ, Saridon, Lactocalamine and Boots Piramal. There have also been ayurvedic joint ventures-Solumiks Piramal with Shree Dhoota and Charak Piramal. Global Bulk Drugs, a NPIL subsidiary, has a tie-up with a US company to tap the export market in specialty chemicals. The strategic alliance with Swiss multinational, Siegfried Pharma, is designed to leverage the latter's skill in the European market. NPIL has acquired the basic research unit of Hoechst Marion Roussel and renamed it, Quest Institute of Life Sciences.

Nicholas Piramal paid $14 million (Rs 61.6 crores) to acquire UK based Rhodia Organique's global inhalation anaesthetics business. Nicholas Piramal has collaborated with Colarado based Nexstar to find leads in life sciences, and is jointly conducting Phase II trials for a peptide-based drug with Seattle based Cytran. The buyout of BioSyntech, Canada based biotechnology company, was a strategic fit for Nicholas Piramal to gain expertise in discovery and development of therapeutic thermogels for regenerative medicines.

**Matrix,**

Matrix one of the fastest growing API (Active Pharmaceutical Ingredients) manufacturers in Indi focused on regulated markets such as US and EU. Matrix Labs have taken the route of acquisitions ' strategic pursuit of growth. In June 2000, the company bought out Herren Drugs and Pharmaceuticals at a' undisclosed price. Herren was later renamed as Matrix Labs. In May 2002, Matrix acquired 54.89% equity in Medicorp Technologies, an API manufacturer, which was the subsidiary of Chennai based Shri Ra Group, with US FDA and TGA (Australia) approvals. In September 2002, Matrix further consolidated by merging with Vorin Laboratory and its subsidiary, Fine Drugs and Chemicals, promoted by Ranbaxy

Matrix had made three significant acquisitions in the span of two and half years. The first was Belgian Doc Pharma, in which Matrix acquired a 22% stake for $263 million (Rs 1144 crore). At that time, Doc Pharma had about 130 products in the EU market, with presence in Belgium, the Netherlands, Italy and France. In 2005, Matrix had a strategic joint venture alliance with

MCHEM Pharma (Group) Ltd of China. MCHEM Pharma Group, based in Xiamen on the east coast of China, manufactures pharmaceutical products ranging from basic chemicals, intermediates, active pharmaceuticals and finished dosage forms.

**Matrix Lab Ltd** and South Africa based $321 million Aspen Pharmacare Holdings Ltd have an alliance for strengthening their business through joint venture in India and South Africa. Both companies have signed two separate memoranda of understanding to enable them to hold cross-country ownership in two pharmaceutical manufacturing units through the joint venture route. Matrix had a portfolio of 160 drugs and 10 manufacturing plants, of which six were approved by the US FDA.

In 2006, one of the biggest takeover deals took place in the Indian pharmaceutical industry when US generic giant Mylan Laboratories acquired Matrix Lab. Earlier, Matrix Lab had acquired loss making companies like Medicorp and Fine Chemicals & Drugs and turned them around.

Mylan paid Rs 306 per share for 71.5% holding in Matrix which came to a total of $736 million.

This acquisition strategy of Mylan was aimed at establishing a global platform and expand its dosage forms and therapeutic categories. This acquisition was also meant to deepen Myjan's vertical integration and enhance its supply chain capabilities. Mylan had practically no foot hold outside the US. Through the merger, the subsidiaries of Matrix provided Mylan the opportunity to access Europe, China and India. The fusion of Matrix helped Mylan consolidate its share in the anti-AIDS product market.

**Cipla**

Cipla has tied up with Ivax and Watson for supply of active pharma ingredients, and with Pentech Pharma to tap the US generics market. Cipla has alliances with the US firm, Biogenerics Inc and the Chinese firm, Dongbao. Cipla has tie-ups with US based Ivax and Watson Pharmaceuticals for the supply of anti-psychotic "Zyprexa.

**Lupin**

In 2009, Lupin acquired a majority stake in Multicare Pharmaceuticals Philippines Inc. In 2008, Lupin acquired 1) Hormosan Pharma Gmbh, a generic company in Germany; 2) a stake in Generic Health Pty Ltd in Australia; and 3) Pharma Dynamics in South Arica.

In 2007, Lupin acquired Vadodara based Rubamin Laboratories Ltd (now rechristened Novodigm Ltd) and Kyowa Pharmaceutical Industry Company Ltd, a leading generic company in Japan.

**Torrent Pharmaceuticals**

Torrent's takeover of the German generics firm, Heumann Pharma, from Pfizer was aimed at establishing generic businesses. Torrent Pharma has plans to set up joint ventures in Japan and South Korea. In 2006, the company entered into a marketing tie-up with Tasly, a pharma group in China, under which it will market Tasly Group's Cardiotonic in India, while Tasly will market Torrent's formulations in China. Torrent Pharma

**Aurobindo pharma**, in the year 2006, acquired a US FDA-compliant current good manufacturing practices (CGMP) facility in New Jersey. This facility would serve as Aurobindo's headquarters in the US. Two group companies, Ranit Pharma Ltd and Calac Pvt Ltd, amalgamated with Aurobindo.

Orchid Chemicals & Pharmaceuticals has an exclusive agreement with Alpharma Inc for marketing its select non-antibiotic generic formulations in the US and Europe. Under this agreement, Orchid will exclusively develop and manufacture 10 non-antibiotic formulations in specific dosage forms and strength for exclusive distribution and marketing by Alpharma in the

US and Europe. These 10 oral formulations fall under speciality, chronic therapeutic segments—such as cardiovascular (CVS) and central nervous system (CNS). The current market size of these 10 products in the US and Europe aggregates to around $10 billion (Rs 4300 crore). Orchid would commence supply of these products once they go off-patent progres-sively from 2007 onwards based on Orchid's regulatory filings and approvals. Alpharma would provide the

Elder Pharma has tied up with Blistex of US to produce lip care products, and with an Italian company, Zambon, to launch drugs in the cerebro-neuropsychiatry and respiratory segments.

**Table 3.1** **Indian Pharmaceutical Evolution**

| 1970<br>Phase I<br>Early Years | 1980<br>Phase II<br>Government Phase | 1990<br>Phase III<br>Development Phase | 2000<br>Phase IV<br>Growth Phase | 2010<br>Phase V<br>Innovation and Research |
|---|---|---|---|---|
| • Market share domination foreign companies<br>• Relative absence of organized Indian companies | • Indian Patent Act 1970<br>• Drug prices capped<br>• Local companies begin to make an impact | • Process development<br>• Production infrastructure creation<br>• Export initiatives | • Rapid expansion of domestic market<br>• International market development<br>• Research orientation | • New IP Law<br>• Discovery research<br>• Convergence |

Source: Pharmascience Inc.

**Table 3.2The list of Indian Pharma Firms Major M&A (1995-2012)**

| Merger | | | Acquisition | | |
|---|---|---|---|---|---|
| **Acqurier** | **Target** | **Deal Date** | **Acqurier** | **Target** | **Deal Date** |
| Yogi Healthcare Ltd. | Core Laboratories Ltd | 31-Mar-93 | Sun Pharmaceutical Inds Ltd & Virtuous Finance Ltd. | M J Pharmaceuticals Ltd | 05-Nov-96 |
| S O L Pharmaceuticals Ltd. | Standard Organics Ltd. | 31-Mar-93 | Sun Pharmaceutical Inds. LtdTamilnadu Dadha Pharmaceuticals Ltd. | Tamilnadu Dadha Pharmaceuticals Ltd. | 31-Mar-97 |
| Aarti Drugs Ltd. | Rupal Chemical Inds. Ltd. | 31-Mar-95 | Lupharma Gmbh, Germany | Abbott India Ltd. | 27-Dec-97 |
| Novartis India Ltd. | Sandoz (india) Ltd | 31-Mar-96 | Ranbaxy Laboratories Ltd | Vorin Laboratories Ltd. | 08-Sep-99 |
| Sanofi India Ltd. | Roussel India Ltd | 20-Jan-98 | Fis. Fiis | Aurobindo Pharma Ltd. | 11-Sep-99 |
| Strides Arcolab Ltd. | Remed Laboratories India Ltd. | 28-Sep-99 | Neelam Gemstones | Maharashtra Antibiotics & Pharmaceuticals Ltd. | 20-Sep-99 |
| Twilight Litaka Pharma Ltd. | Clover Pharmaceuticals Pvt. Ltd. | 03-Nov-99 | Gazal Industrial Holdings | Orchid Chemicals & Pharmaceuticals Ltd. | 27-Sep-99 |
| Sun Pharmaceutical Inds. Ltd | Gujarat Lyka Organics Ltd | 07-Nov-99 | Vorin Laboratories Ltd. | Fine Drugs & Chemicals Ltd | 11-Oct-99 |

| | | | | | |
|---|---|---|---|---|---|
| Dr. Reddy's Laboratories Ltd | Cheminor Drugs Ltd | 14-Dec-99 | Ranbaxy Laboratories Ltd. | Ind-swift Laboratories Ltd. | 17-Oct-99 |
| Dr. Reddy's Laboratories Ltd | American Remedies Ltd. | 14-Dec-99 | Sun Pharmaceuticals | M J Pharmaceuticals Ltd. | 02-Nov-99 |
| Abbott India Ltd. | Beem Healthcare Ltd | 08-Mar-00 | Dr. Reddy's Laboratories Ltd. | American Remedies Ltd. | 26-Nov-99 |
| Strides Arcolab Ltd. | Bombay Drugs & Pharmas Ltd | 08-Jun-00 | Wockhardt Ltd. | Wallis Group Ltd. | 31-Dec-99 |
| Asta Medica A G | German Remedies Ltd | 01-Sep-00 | Novartis India Ltd. | Ciba Ckd Biochem Ltd | 30-Nov-00 |
| Aurobindo Pharma Ltd. | Sri Chakra Remedies Ltd | 23-Oct-00 | Nicholas Piramal India Ltd & Npil Fininvest Ltd. | Rhone-poulenc (india) Ltd. | 23-Dec-00 |
| Sun Pharmaceutical Inds. Ltd | Pradeep Drug Co. Ltd | 11-Feb-01 | Ranbaxy Laboratories Ltd. | Gufic Pharma Ltd | 05-Jan-01 |
| Sun Pharmaceutical Inds. Ltd | Sun Pharmaceutical Advanced Research Center Pvt. Ltd. | 18-Mar-01 | Ranbaxy Laboratories Ltd | S R L Ltd. | 25-Jul-01 |
| Mylan Laboratories Lt | Dolphin Drugs Pvt. Ltd. | 02-Aug-01 | Vorin Laboratories Ltd. | Fine Drugs & Chemicals Ltd | 03-Jan-02 |
| Alkem Laboratories Ltd. | Indo Propkem Ltd. | 01-Sep-01 | Pharmacia Corpn. U S A | Pharmacia Healthcare Ltd. | 25-Jan-02 |
| Ranit Pharma Ltd | Sreeshma Bulk Drugs Pvt. Ltd | 01-Sep-01 | Astra Pharmaceuticals A B | Astrazeneca Pharma India Ltd. | 04-Mar-02 |
| Ranit Pharma Ltd | Vamsi Organics Pvt. Ltd. | | Cadila Healthcare Ltd. | Banyan Chemicals Ltd | 01-Apr-02 |
| Alkem Laboratories Ltd | Startronic Pharmachem Pvt. Ltd | 01-Sep-01 | Aurobindo Pharma Ltd. | Ranit Pharma Ltd. | 08-Apr-02 |
| Zenith Pharmaceuticals Ltd. | Strides Arcolab Ltd. | 14-Nov-01 | Micro Labs Ltd. | Eros Pharma Ltd | 09-Apr-02 |
| Glaxosmithkline Pharmaceuticals Ltd. | Croydon Chemical Works Ltd | 05-Mar-02 | Mylan Laboratories Ltd. | Medicon Pharmaceuticals Pvt. Ltd. | 16-Apr-02 |
| Arch Pharmalabs Ltd. | Arch Commerz Pvt. Ltd | 27-Mar-02 | Cadila Healthcare Ltd. & Recon Healthcare Ltd | German Remedies Ltd | 18-Apr-02 |
| Sun Pharmaceutical Inds. Ltd | M J Pharmaceuticals Ltd | 25-May-02 | Mylan Laboratories Ltd | Medicorp Technologies India Ltd | 18-May-02 |
| Pfizer Ltd | Parke-davis (india) Ltd | 25-Jun-02 | Morepen Laboratories Ltd. | Total Care Ltd. | 07-Jun-02 |
| Wyeth Ltd. | Geoffrey Manners & Co. Ltd | 10-Jul-02 | Solvay Pharmaceuticals B V | Solvay Pharma India Ltd | 04-Jul-02 |
| Mylan Laboratories Ltd. | Vorin Laboratories Ltd | 17-Sep-02 | Medikon Laboratories Ltd. | Fine Drugs & Chemicals Ltd | 30-Jul-02 |
| Aurobindo Pharma Ltd. | Calac Pvt. Ltd | 09-Nov-02 | Maneesh Pharmaceuticals Ltd. | Meghdoot Chemicals Ltd | 30-Jul-02 |

| | | | | | |
|---|---|---|---|---|---|
| Aurobindo Pharma Ltd | Ranit Pharma Ltd | 09-Nov-02 | Punjab Chemicals & Crop Protection Ltd | Alpha Drug India Ltd | 25-Feb-03 |
| Cadila Healthcare Ltd. | German Remedies Ltd | 15-Jan-03 | Wockhardt Ltd | C P Pharmaceuticals Ltd | 08-Jul-03 |
| Dr. Reddy's Laboratories Ltd | Zenovus Biotech Ltd. | 31-May-03 | Wander Pvt. Ltd | Wanbury Ltd. | 26-Sep-03 |
| Indoco Remedies Ltd. | Warren Pharmaceuticals Ltd. | 13-Jun-03 | A B L Biotechnologies Ltd | Samudra Biopharma Pvt. Ltd. | 17-Mar-04 |
| Abbott India Ltd. | Lenbrook Pharmaceuticals Ltd | 17-Oct-03 | Krebs Biochemicals & Inds. Ltd. | Synbiotics Ltd. | 17-Mar-04 |
| Cadila Healthcare Ltd | Banyan Chemicals Ltd | 05-Feb-04 | Wockhardt Ltd. | Esparma Gmbh | 07-May-04 |
| Fulford (india) Ltd | Wellnex Pharmaceuticals Pvt. Ltd. | 05-Mar-04 | Indoco Remedies Ltd. | Solvay Pharma India Ltd. | 28-Sep-04 |
| Glaxosmithkline Pharmaceuticals Ltd | Burroughs Wellcome (india) Ltd. | 10-Mar-04 | Wanbury Ltd. | Doctors Organic Chemicals Ltd | 14-Nov-05 |
| Sun Pharmaceutical Inds. Ltd. | Hindustan Antibiotics Ltd. | 23-Apr-04 | Cargill India Pvt. Ltd. | Matrix Bioscience Ltd. | 28-Nov-05 |
| Sun Pharmaceutical Inds. Ltd. | Phlox Pharmaceuticals Ltd. | 06-Jul-04 | Mylan Laboratories Ltd. | Concord Biotech Ltd. | 07-Dec-05 |
| Pfizer Ltd. | Pharmacia Healthcare Ltd | 08-Jul-04 | D Gopal & B Srinivas | Vista Pharmaceuticals Ltd. | 18-Jan-06 |
| Aarti Industries Ltd. | Anushakti Chemicals & Drugs Ltd. | 29-Dec-04 | Ranbaxy Laboratories Ltd. | Sonke Pharmaceuticals (pty) Ltd. | 06-Feb-06 |
| Aarti Industries Ltd. | Avinash Drugs Ltd | 29-Dec-04 | Aurex Generics Ltd. | Milpharm Ltd. | 10-Feb-06 |
| Sun Pharmaceutical Inds. Ltd | Bazley Finvest Ltd. [ | 08-Feb-05 | Marksans Pharma Ltd. | Nova Pharmaceuticals Australasia Pty. Ltd. | 02-Mar-06 |
| Marksans Pharma Ltd. | Glenmark Laboratories Ltd | 18-Mar-05 | Serum Institute Of India | Lyka Labs Ltd. | 29-Mar-06 |
| Mylan Laboratories Ltd. | Fine Chemical Co. Ltd. | 11-Apr-05 | Ranbaxy (netherlands) B.v. | Terapia S A | 29-Mar-06 |
| Zenotech Laboratories Ltd. | Hemarus Healthcare Pvt. Ltd | 19-Dec-05 | Ranbaxy Laboratories Ltd. | Ethimed N V | 30-Mar-06 |
| Pfizer Ltd. | Duchem Laboratories Ltd. | 24-Apr-06 | Zyden Gentec Ltd. | Sree Venkateshwara Medichem | 29-Apr-06 |
| Johnson & Johnson Ltd. | Olympus Enterprises Ltd. | 08-Jun-06 | Dishman Pharma Solutions A G | Carbogen Amcis A G | 24-May-06 |
| Ankur Drugs & Pharma Ltd | Vaibhav Healthcare Pvt. Ltd. | 04-Sep-06 | Wockhardt Ltd. | Dumex India Pvt. Ltd | 30-Jun-06 |
| Wanbury Ltd. | Pharmaceutical Products Of India Ltd. | 01-Oct-06 | Ranbaxy Laboratories Ltd. | Zenotech Laboratories Ltd. | 18-Jul-06 |
| Indoco Remedies Ltd. | La Nova Chem (india) | 24-Jan-07 | Actis | Paras Pharmaceutic | 21-Jul-06 |

| | | | | | |
|---|---|---|---|---|---|
| | Pvt. Ltd | | | als Ltd. Actis | |
| J B Chemicals & Pharmaceuticals Ltd. | Lekar Healthcare Ltd | 06-Feb-07 | Wockhardt Ltd. | Pinewood Laboratories Ltd | 03-Oct-06 |
| Southern Petrochemical Inds. Corpn. Ltd. | Mitocon Biotec Ltd | 27-Feb-07 | Bal Pharma Ltd. | Basav Chem Ltd. | 27-Oct-06 |
| Sequent Scientific Ltd. | Elixir Chemicals Pvt. Ltd | 30 Jun 2008 | Ipca Laboratories Ltd. | Mangalam Drugs & Organics Ltd. | 27-Oct-06 |
| Cadila Healthcare Ltd. | Zydus Hospitals & Medical Research Pvt. Ltd. | 04-Jul-08 | Aurobindo Pharma Ltd | Senor Organics Pvt. Ltd | 14-Nov-06 |
| Strides Arcolab Ltd. | Grandix Laboratories Ltd. | 22 Jul 2008 | Actavis | Grandix Pharmaceuticals Ltd | 01-Dec-06 |
| Strides Arcolab Ltd. | Global Remedies Ltd | 22 Jul 2008 | Ranbaxy Laboratories Ltd. | Be-tabs Pharmaceuticals (pty.) Ltd. | 01-Dec-06 |
| Strides Arcolab Ltd. | Quantum Remedies Pvt. Ltd | 22 Jul 2008 | Agile Pharma B V | Pharmacin International B V | 29-Dec-06 |
| Lupin Ltd. | Hormosan Pharma Gmbh | 30 Jul 2008 | Ranbaxy Laboratories Ltd. | Krebs Biochemicals & Inds. Ltd | 15-Jan-07 |
| Marksans Pharma Ltd. | Relonchem Ltd | 28-Aug-08 | Bliss G V S Pharma Ltd. | G V S Laboratories Pvt. Ltd. | 15-Feb-07 |
| Aarti Industries Ltd | Avinash Drugs Ltd. | 09 Feb 2009 | Cadila Healthcare Ltd. | Liva Healthcare Ltd. | 18-Mar-07 |
| Bal Pharma Ltd. | Basav Chem Ltd. | 01 Jun 2009 | Glenmark Holding S A | Medicamenta A S | 26-Mar-07 |
| Lupin Ltd. | Novodigm Ltd | 25 Sep 2009 | Ranbaxy Laboratories Ltd. | Jupiter Bioscience Ltd | 06-Apr-07 |
| Lupin Ltd | Lupin Pharmacare Ltd | 25 Sep 2009 | Cadila Healthcare Ltd. | Nippon Universal Pharmaceutical Ltd. | 19-Apr-07 |
| Lupin Ltd | Lupin Herbal Ltd | 25 Sep 2009 | Maneesh Pharmaceuticals Ltd. & Svizera Labs Pvt. Ltd. (pac) | Phaarmasia Ltd. | 26-Apr-07 |
| Aurobindo Pharma Ltd | Trident Life Sciences Ltd | 12 Nov 2009 | N B Z Pharma Ltd. | Kilitch Drugs (india) Ltd | 29-May-07 |
| Intas Pharmaceuticals Ltd | Zora Pharma Ltd | 08 Dec 2009 | Expert Chemicals (india) Pvt. Ltd. | Wanbury Ltd. | 06-Jun-07 |
| Ortin Laboratories Ltd. | Vineet Laboratories Pvt. Ltd. | 21-Jul-10 | R F C L Ltd. | Wipro Biomed | 07-Jun-07 |
| Abbott India Ltd. | Solvay Pharma India Ltd. | 24-Nov-10 | Strides Arcolab Ltd. | Grandix Pharmaceuticals Ltd | 11-Jun-07 |
| Intas Pharmaceuticals Ltd. | Dolphin Laboratories Ltd. | 29 Mar 2011 D | Ranbaxy Laboratories Ltd | Zenotech Laboratories Ltd | 03-Oct-07 |
| Shilpa Medicare Ltd. | Raichem Life Sciences Pvt. Ltd. | 11 Aug 2011 | Elder Pharmaceuticals Ltd. | Biomeda Ltd. | 29-Aug-07 |
| Ipca Laboratories | Tonira | 17 Sep | S M S | Sreenivasa | 30-Oct-07 |

| | | | | | |
|---|---|---|---|---|---|
| Ltd. | Pharma Ltd. | 2011 | Pharmaceuticals Ltd. | Pharma Pvt. Ltd | |
| Suven Life Sciences Ltd. | Suven Nishtaa Pharma Pvt. Ltd. | 31-Jan-12 | Arch Pharmalabs Ltd. | Avon Organics Ltd. | 07-Nov-07 |
| | | | Plethico Pharmaceuticals Ltd | Natrol Inc. | 19-Nov-07 |
| | | | Aspen S A. | Lakerose Ltd. | 20-Nov-07 |
| | | | Strides Arcolab Ltd. | Co-pharma Ltd. | 20-Nov-07 |
| | | | Marksans Pharma (u K) Ltd. | Hale Group Ltd. | 07-Jan-08 |
| | | | Marksans Pharma (u K) Ltd. | Bell. Sons & Co. (druggists) Ltd. | 07 Jan 2008 |
| | | | Biocon Sa | Axicorp Gmbh | 11 Feb 2008 |
| | | | Carwin Mercantiles Pvt. Ltd. | Gennex Laboratories Ltd. | 19-Feb-08 |
| | | | Akzo Nobel India Ltd. | Polyinks Ltd. | 28-Mar-08 |
| | | | R F C L Ltd | Alved Pharma & Foods Pvt. Ltd | 31-Mar-08 |
| | | | R F C L Ltd. | Bremer Pharma Gmbh | 31 Mar 2008 |
| | | | Piramal Enterprises Ltd. | Khandelwal Laboratories Pvt. Ltd | 15 Apr 2008 |
| | | | Solrex Pharmaceuticals Co. | Orchid Chemicals & Pharmaceuticals Ltd. | 22 Apr 2008 |
| | | | Cadila Healthcare Ltd. | Laboratories Combix | 30 May 2008 |
| | | | Emami Ltd. | Zandu Realty Ltd. | 02 Jun 2008 |
| | | | Daiichi Sankyo Company Ltd. | Ranbaxy Laboratories Ltd. | 16 Jun 2008 |
| | | | Shilpa Medicare Ltd. | Loba Feinchemie | 30 Jun 2008 |
| | | | Dr. Reddy's Laboratories Ltd. | Perlecan Pharma Pvt. Ltd. | 30 Jul 2008 |
| | | | Cadila Healthcare Ltd. | Etna Biotech | 11 Nov 2008 |
| | | | Sun Pharmaceutical Inds. Inc. | Chattem Chemicals Inc | 26 Nov 2008 |
| | | | Piramal Enterprises Ltd. | Rxelite Inc | 28-Jan-09 |
| | | | Aurobindo Pharma Ltd. | Trident Life Sciences Ltd | 17 Aug 2009 |
| | | | Abbott Capital India Ltd | Solvay Pharma India Ltd. | 17-Feb-10 |

| | | | | | |
|---|---|---|---|---|---|
| | | | Parenteral Drugs (india) Ltd. | Mascareignes Pharmaceutical Manufacturing Co. Ltd. | 19-Feb-10 |
| | | | Piramal Enterprises Ltd. | Bharat Serums & Vaccines Ltd. | 22-Apr-10 |
| | | | Twilight Litaka Pharma Ltd. | Briocia Pharma (india ) Ltd. | 06 May 2010 |
| | | | Piramal Enterprises Ltd. | Biosyntech Inc | 22-Jun-10 |
| | | | Par Pharmaceutical Companies, Inc. | Edict Pharmaceuticals Pvt. Ltd. | 28-May-11 |
| | | | Zynesher Pharmaceuticals Usa | Nesher Pharmaceuticals Inc. | 21 Jun 2011 |
| | | | Ishares B S E Sensex Mauritius Company | Dr. Reddy's Laboratories Ltd. | 12-Sep-11 |
| | | | Vivimed Labs Ltd. | Klar Sehen Pvt. Ltd. | 03-Oct-11 |
| | | | Serum Institute Of India Ltd. | Panacea Biotec Ltd | 25-Oct-11 |
| | | | Serum Institute Of India Ltd. | Orchid Chemicals & Pharmaceuticals Ltd. | 19-Dec-11 |
| | | | Watson Pharmaceuticals Inc. | Ascent Pharmahealth Ltd. | 24-Jan-12 |
| | | | Tano Mauritius India F V C I - I I | Shilpa Medicare Ltd. | 15 May 2012 |
| | | | Bliss G V S Pharma Ltd. | Kremoint Pharma Pvt. Ltd. | 28 Jun 2012 |
| | | | Serum Institute Of India Ltd. | Bilthoven Biologicals B V | 04 Jul 2012 |
| | | | Serum Institute Of India Ltd. | Orchid Chemicals & Pharmaceuticals Ltd. | 20-Jul-12 |
| | | | Kilitch Co. (pharma) Ltd. | Kilitch Drugs (india) Ltd. | 20 Sep 2012 |
| | | | Erba Lachema S R O | Maxmat S A | 15-Oct-12 |
| | | | Devkant Synthetics (i) Pvt. Ltd. | Principal Pharmaceuticals & Chemicals Ltd | 26 Oct 2012 |
| | | | Caraco Pharmaceutical Laboratories Ltd. | U R L Pharma Inc. | 17 Dec 2012 |
| | | | Relish Pharmaceuticals Ltd. | Proper Dealcomm Pvt. Ltd. | 02-Jan-13 |

Source: PROWES, Hindu Business Line, Business Standard.

**Conclusion:**

On the basis of above discussion it can safely be concluded that M&A in pharmaceutical industry is becoming increasingly important for exploring newer markets and products for future growth.

The success and failure of M&A undertaken by the Indian firms need to be analyze in terms of creating and capturing synergy and what are the best possible tools could be applied to measure the success of M&A are discussed in next chapter.

# Chapter-4

## Introduction:

On the backdrop of the exploration of all possible evidence deciding the context of research the next important steps in any scientific research is to decide the research framework and methodology to be adopted to make analysis.

Therefore, the present chapter is devoted to discuss the Research gap. Context of the Study. Research Frame. Objectives & Research Methodology of the current study.

- **Research gap**
- **Context of the study: Pharmaceutical Industry of India**
- **Objective of Study**
- **Research framework**
- **Research Methodology**

## Research gap

M&A regarded as short cut for companies to grow ,restructure itself and to achieve the globalised status quickly, in some cases M&A seems to be the only means to obtained critical resource such as brand ,technical know-how and global supply chain network which have been developed and difficult to replicate. Despite all the positive aspect the success rate of M&A all over the world is very low with majority leading to the decline of the shareholders wealth .Why?, in most of the cases the M&A are failed to achieve the expected value gain have become crucial point of debate among researchers and corporate consultants, especially the researchers world over are trying to make a comprehensive analysis in order to find the critical factors which need to be taken into consideration in making M&A deal in order to achieve expected value gain.

Sirower(1997) there are large number of research studies found in this field of M&A but no academic and empirical investigation have been able to produce any critical evidence on what constitute a successful M&A. A number of studies also found in India but none of them are successful to produce any evidence on what constitute a successful M&A.

Emanuel Gomes,Duncan N. Angwin,Yaakov Weber,Shlomo Yedidia Tarba (2013)emphasis the need of pluralist approach to analyze and understand the M&A process as-

"The high failure rate of mergers and acquisitions suggests that neither scholars nor practitioners have a thorough understanding of the variables involved in the M&A process its complex interrelationships. The existing body of knowledge is characterized by several independent streams of management research that have studied discrete variables in either the pre acquisition or post acquisition stage. From the review of the literature in this article, it can be concluded that despite the considerable amount of research carried out into M&A over the past half century, there is limited and compartmentalized understanding of the complex acquisition process, since the various streams of research on acquisition activity are only marginally informed by one another"

King, D. R., Dalton, D. R., Daily, C. M., & Covin, J. G. (2004) conclude that:

"the conditions most commonly studied in prior M&A research do not impact post-acquisition performance. Thus, despite decades of research, what impacts the financial performance of firms engaging in M&A activity remains largely unexplained".

The brief evidences discussed above are more than enough to understand and analyze the M&A in the integrative perspective in order to obtain the desired result.

**Context of the study: Pharmaceutical Industry of India**

The proposed study focused specifically on the pharmaceutical industry of India for several reasons- First, The Pharmaceutical Industry of India one of the most global industries as compares to other industries in nature and engages in M&A activity extensively. So, the outcome of proposed study would have broad applicability.

Second, the industry is different from most others because of the comparatively high cost of bringing a new product to market and low rate of success .There is an inherent incentive for a company to use M&A activity either to supplement or to substitute for early stage research. Therefore, if the synergy gain is prime motive for wealth enhancing and value creation, we should find this effect for the pharmaceutical industry of India.

The proposed study is an attempt to reinvestigate same issue in the context of Indian Pharmaceutical Industry and a holistic approach has been adopted in order to model the factors which are crucial and must be taken into consideration by firms while they go for undertaking M&A activities.

**Objective of Study**

**a. Major:** This research is an attempt to formulate an integrative model for evaluation of M&A performance in terms of synergy value gain in the context of Indian Pharmaceutical Industry by identifying the synergy value drivers and using almost all major tools such as Event Study, Jensen Measures and Accounting Ratio to analyze the value creation in short run as well as in long run period.

**b. Minor:**

**1.** Through extensive literature survey of past researches conducted on similar and same theme to identify the value creation variables isolated by researcher.

2. To isolate generic factors by generating expert opinion on the importance of the drivers

3. To analyze the value capturing of in M&A in short run

4. To analyze the value capturing of in M&A in long run

**Research Framework**

The important objective of any scientific research is to achieve objectivity in order to create theories which should give the similar result whenever it is used, but total objectivity is not possible in such types of research where

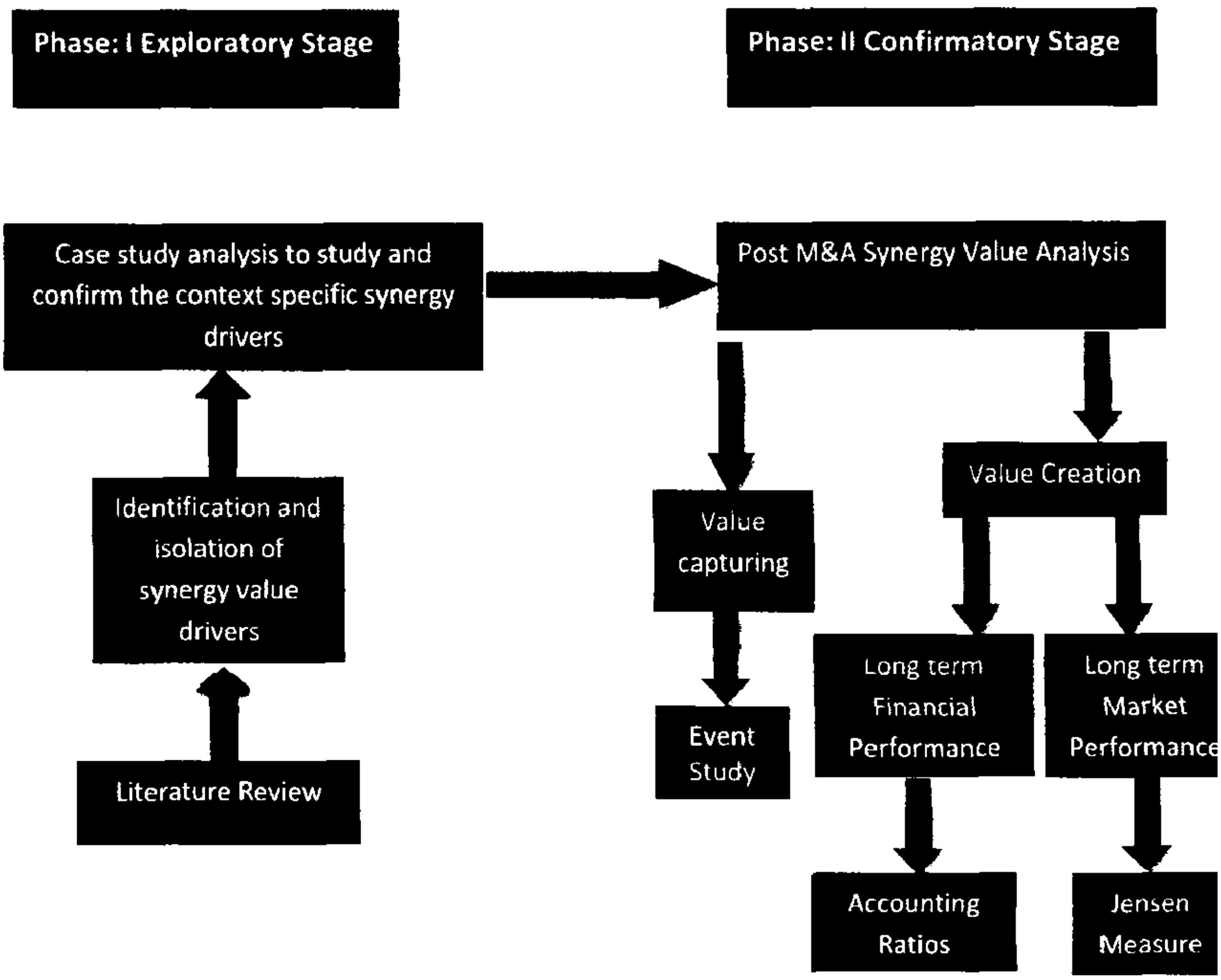
there is a scope of difference of opinion ,especially it is true in the cases related to social sciences .Therefore , keeping in view the nature of proposed study it is necessary to define and explain the standpoint of researcher in order to help the readers to better understand the essence of this study.There are two main research streams are often considered to decide the particular research methodology for conducting any scientific investigation. First, positivist-emphasis on objectivity, precision, rationality .It characterizes abstraction and generalizations. Elisa GOT Fabrice Sanz(2002) " In fact, such requirements seem to be difficult to respect when tackling social sciences issues. If hard sciences, such as
physics or mathematics are appropriate for such an approach, human and social organizations or phenomenon are difficult to study when considering the content of every part the interactions between elements. Furthermore social relations and interactions cannot be always expressed through mathematical formulas and tested systematically".

Second,( (Kerlinger, 1973 as cited in, Elisa GOT Fabrice SANZ,2002), " the hermeneutic approach has been built through a reaction towards the mechanistic approach of positivism. This approach deals more with interpretation and understanding. According to hermeneutics, a holistic understanding is essential in order to obtain valid and meaningful results. Within hermeneutics, the researcher's role takes over the role of statistical analysis, which was praised in the positivist perspective. Interpretation of the material is allowed in hermeneutics and there is a strive for total comprehension. Hermeneutics does not have universal validity as a goal. Rather it aims to penetrate the abstract of reality and make it more concrete. As matter of fact, an hermeneutic researcher approaches the problem in a subjective manner. The hermeneutic approach implies an interpreting spiral in which facts are analyzed and interpreted in order to reach a pre-understanding (figure 1). First, it is more a spiral than a circle since the process of understanding may not seem static and closed. Understanding the process is characterized as an ongoing process of experiences, pre-understanding, and interpretation by new understanding. This process has no end".

**Research Methodology**

The Research Methodology may be defined as the way to find out that whether there is synergy gain arises in M&A took place in Indian Pharmaceutical Industry. This study is an attempt to integrate the major methodologies used by researchers on the research problems similar to problems of given study. An integrative model has been developed aiming to benchmark the evaluation of M&A in terms of value creation. The model (Fig 4.1) has two phases; the first phase is Exploratory and second phase is confirmatory. The literature survey and identification and isolation of 'synergy' value Drivers/Key consideration/variables have already been discussed in the previous chapters.

**Figure 4.1**
**Research Model**




Source: Own

**Survey:**

Earl Babbie (1990) The survey method involved examination of phenomenon among the general population in wide variety of natural settings. It employs questionnaires, interviews and other related methods. Oppenheim(1992) most of the time independent variables are not manipulated nor any control conditions employed. The objective of the most research requires factual ,attitudinal and/or behavioural data .The survey research provides the researcher with the means of gathering both qualitative and quantitative data required to meet such objectives. C.William Emory,Donald R (1991) the advantage using questionnaire include –

- Reduce interview bias
- Cost Saving
- Ample of time in completing the questionnaire
- Convenience
- Assurance of anonymity

**Instrument Preparation**

The variables were mainly selected from the past studies conducted on similar topic. After making a comprehensive analysis of all possible key drivers the researcher has isolated forty key synergy value drivers and an instrument in the form of questionnaire has been formed to make a survey of opinion of expert in order to understand the key synergy drivers in the context of proposed study. The questionnaire was sent to the respondent by email/by post.

**Expert Panel Selection**

The expert panelists are defined as a group of knowledgeable people: those who can provide relevant input on the subject understudy, are committed and interested to share their views. Therefore, the questionnaires given in table were sent to the academicians those who have some research exposures in the field of M&A and managers of pharmaceutical firms of India. The data has been generated in the form four point Rating Scale. Out of more than 150 experts 30 have given their opinion.

***The expert survey is made keeping in view the Null Hypothesis that:***

**$H_{01}$= There is no significant difference between the importance of the different synergy value drivers identified and the opinion of the expert on the importance of synergy drivers.**

**Case study Methodology**

The case study methodology is preferred when the problem in hand need to be viewed in holistic manner .This methodology is used when researcher is posed to question, 'why' and 'how'. (Gummesson,1988 as cited in Christine Benedichte,2001) an important advantage of case study research is the opportunity for a holistic view of the process: "The detailed observations entailed in the case study method enable us to study many different aspects, examine them in relation to each other. In order to enhance the knowledge and basis of the research the qualitative analysis of M&A cases is needed. Though in this study a quantitative tools such 'event study' has also been used to seek answer of one of the questions posed by research that is 'what'. In fact in a qualitative study, the researcher collect some amount of the data of the nature , which cannot be quantified and meaningfully expressed in numbers in order to interpret some result though, this non quantifiable data have its vary relevance . Because every merger and acquisition is a unique event, occurring in a unique environment that is subject to innumerable influences, case studies have also provided a rich stream of research. Therefore, qualitative methodology is helpful to capture several different perspectives regarding M&A. Such a case study involves many immeasurable parameters, which only a qualitative method can describe and explain. By this way, case studies are generalizable to theoretical propositions and not to populations or universes. Yin, (1994) The case study does not represent a "sample", and the investigators goal is to expand theories and not to enumerate frequencies. The M&A of Indian Pharmaceutical Industry investigated in this study are listed as-

Table 4.2

| S No | Deal Year | Acquirer | country | Target | Origin | Deal Value |
|---|---|---|---|---|---|---|
| 1 | Nov 7, 2006 | Arch Pharmalabs Limited (APL | **India** | Avon Organics Limited | **India** | **NA** |
| 2 | September 30, 2009 | Aurobindo Pharma Ltd's | **India** | Trident Life Sciences Ltd | **India** | **Rs 38.8 crores** |
| 3 | June 8, 2006 | Ranbaxy Laboratories | **India** | Terapia S.A. | **Romania** | **$324 million** |
| 4 | 16th Feb 2006 | Dr Reddy | **India** | Betapharm | **Germany** | **INR 2550 crore** |
| 5 | 2008 | Emami | **India** | Zandu | **India** | **NA** |
| 6 | April 20,2008 | Fresenius Kabi | **Singapore** | Dabur Pharma | **India** | **INR 8,782 million** |
| 7 | Dec 15, 2009 | Hospira, Inc | **USA** | Orchid Chemicals & Pharmaceuticals Ltd. | **India** | **$400 million** |
| 8 | 7,Jan,2008 | Marksans Pharma | **India** | Hale Group, | **UK** | **NA** |

| | | | | | | |
|---|---|---|---|---|---|---|
| 9 | August 28, 2006 | Mylan Laboratories | **USA** | Matrix Laboratories | **India** | **$736 million** |
| 10 | Nov 7, 2006 | Plethico Pharma | **India** | Natrol, USA | **USA** | **US$ 80.8 mn** |
| 11 | 11 June 2008 | Daiichi Sankyo | **Japan** | Ranbaxy | **India** | **USD 4.6 billion** |
| 12 | October 15, 2007 | Shilpa Medicare Ltd | **India** | LOBA Finchemie AG | **Austria** | NA |
| 13 | : May 21, 2007 | Sun Pharma Limited (APL | **India** | Taro Pharma | **Israel** | USD 454 |
| 14 | 21 Dec .2011 | Zydus Cadila | **India** | Biochem | **India** | NA |
| 15 | March 29.2004 | Matrix Laboratories | **India** | Vera Laboratories Ltd (VLL | **India** | 28.47 |

**Source:** Compiled from Business Magazines, News Papers and Web site of different Firms

The analysis of different cases of M&A in Indian pharmaceutical industry is made keeping in view Null Hypothesis is that-

**$H_{02}$: There is no significant difference between the expert opinion regarding the M&A value drivers and the motives behind M&A as reported in different media and companies report.**

**Event Study**

The first 'event study' was undertaken by Eugene F. Fama, Lawrence Fisher,Michael C. Jensen and Richard Roll(1969) to examine the process by which common stock prices adjust to the information (if any) that is implicit in stock split. The 'event Study' can be categorized as a speed of adjustment of market price of security to new information. In 'semi strong form of the efficient market' the 'event study' is the principal research tool to study the impact of event or information on security price.

An 'event study' averages the cumulative performance of security over time, from a specified time period before an event to a specified time period after the event.

The event study methodology has several attractive features. First, the data is publicly available, permitting empirical studies on large data samples. Second, it relies upon the well respected efficient market hypothesis. Third, because "abnormal" returns are calculated, the data is not subject to industry sensitivity, enabling a broad cross-section of firms to be studied. The event study methodology is used to examine short-term stock price reaction to M&A announcements.

**Measurement of Abnormal Return (AR)**

Each company security return has two components. There is part of return which can be attributed to the impact of any event such M&A and on the other hand some part of the return can be attributed to the market movement. The impact of any event on stock price is measured by eliminating the market's induced influence on the changes of the price of stocks .The return obtained by subtracting market induced return from the security return at the time of announcement the event is called residual .The methodology to analyze it is called Residual Analysis Methodology. The residual return is explained by the announcement of particular event which affect the prices of stocks.

In this study traditional market model with value weighted market index (BSE SENSEX) has been used to measure the market impact on the movement in stocks.

Therefore, the market model establishes the relation between the return of market and stocks in linear fashion. The parameter which captures the impact of market on stocks return is called beta. Mathematically, the market model can be expressed as given in eq-1

$$Ri,t = \alpha + \beta * Rm + \varepsilon_i \qquad (1)$$

Where

$R_{i,t}$ = Return of security of firm i at time t

$R_{m,i}$ = Return on market Index(BSE SENSEX)

$\varepsilon_i$ = Error term

$\alpha_i$ ,$\beta_i$ are the parameters of the relationship between market index and firm's security. Since return of security do not reflect the impact of event at time of announcement immediately and there are also chances that the impact of event do not last in one day but it remains a few days preceding the event day and last few days after the event day. This period of few days starting before event date and last few days after the event day is called event window. So, in order to analyze the impact of the event on whole event window the AR is cumulated (CAAR) for the chosen event widow. According to Briston, R. J., Saadouni, B., Mallin, C. A., & Coutts, J. A. (1992).CAAR should be calculated for different event widow.

The different event windows chosen in this study are given as-

(-10,10),(-10,2),(-5,5) ,(-2,2),(-1,1),(+2,20)

**Statistical Significance Test for AARs and CAARs**

There are two methods which can be used to measure the statistical significance of AAR and CAARs

**I. Traditional Method (Without Stardadizing the AR)** In this method the statistical significance of AAR and CAAs is tested as given in the following ways-

**Statistical Significance of AARs-**

The statistical significance of the AR for any given day is tested keeping in view the Null Hypothesis that for that given event window day the Abnormal Return is zero and the test statistic for null hypothesis is given as-

$$Test\ Statistic = \frac{ARR_i}{(\sigma AAR_i)} \qquad (1)$$

Where

$ARR_i$= The Abnormal Return for given day of the Event Window

$\sigma ARR_i$ = the standard deviation of the AAR for estimation period

$$\sigma AAR^2 = \sqrt{\sum_{t=-250}^{-20} \frac{(AAR_i - \overline{AAR_i})^2}{T-1}}$$

**B. Statistical significance Test for Cumulative Abnormal Return (CAR)**

$$Test\ Statistic = \frac{CAAR_i}{\sigma AAR_i \sqrt{k}}$$

**II. Statistical Significance of AR and CAR (with Standardization of AR and CAR)**

This model of testing the significance of ARs is developed by James M. Patell (1976)) and used in finance studies by Dodd, P., & Warner, G. B. (1983). This test is known in the finance literature as 'Patell test'. Bradley, Desai, and Kim (1988), Das, S., Pattanayak, J. K., & Pathak, P. (2007); Jain, P. C. (1986), Cybo-Ottone and Murgia (2000) and Henderson Jr., G. V. (1990) are some of the studies used this methodology in testing the significance of AR.

The Statistical Significance of AR and CAR is computed as give in equation 3 and 4

$$SAR_{i,t} = \frac{AR_{i,t}}{S_{i,t}} \qquad 3$$

$SA_{i,t}$ = Standardized Abnormal Return

Where is calculated as-

$$S_{i,t} = \sqrt{S_i^2 \times \left( 1 + \frac{1}{250} + \frac{(R_{m,E_i} - \overline{R}_m)^2}{\sum_{t=-250}^{-20} (R_{m,t} - \overline{R}_m)^2} \right)}$$

$$SCAR_i = \frac{\sum_{t=0}^{k} SAR}{\sqrt{K}} \qquad 4$$

Where:

SCAR = Cumulative Standardized Abnormal Return

K= the period for Event Window for which the Abnormal Return is cumulated

The 'Patell Test' has been used in the current study because according to Asquith (1983) "to produce independent and identically distributed excess returns, the excess returns must be standardized". Therefore, the standardized excess returns are tested for determining the statistical significance by using standardized test.

**The event study is conducted keeping in view the Null Hypothesis that**

**$H_{03}$: There is no value capturing at or around the announcement days of M&A in all companies are to be investigated in this study**

**Long term Financial Performance: Accounting Based Measures**

Accounting-based measures of performance have been used in the form of different financial and operating ratios. The definition of "success" began to take on a longer-term perspective: perhaps it took three to five years to fully reap the benefits of the combined firm. There are four such accounting based indicators are used in this study to analyse the post M&A performance of the Indian pharmaceutical firms.

**1. Gross Profit Margin.**

This shows the average amount of profit considering only sales and the cost of the items sold. This tells how much profit the product or service is making without overhead considerations. As such, it indicates the efficiency of operations as well as how products are priced

Gross profit margin = Gross Profit/ Net Sales

Where:
**Gross profit** = Net sales - Cost of Goods Sold

2. **Operating Profit Margin**

This ratio indicates the profitability of current operations. This ratio does not take into account the company's capital and tax structure.

Operating profit margin = Operating Income/Net Sales

Where:
**Operating income** = Earnings Before Tax and Interest from continuing operations

**3. Net Profit Margin**

Net profit margins are those generated from all phases of a business, including taxes. In other words, this ratio compares net income with sales. It comes as close as possible to summing-up in a single figure how effectively managers run the business:

Net Profit Margins = Net Profits after Taxes/Sales

4. **Return on net worth**: The two basic components of this ratio are net profits and shareholder's funds. Shareholder's funds include equity share capital, (preference share capital) and all reserves and surplus belonging to shareholders. Net profit means net income after payment of interest and income tax because those will be the only profits available for share holders.

Formula of return on shareholder's investment or net worth Ratio:

Return on share holder's investment = {Net profit (after interest and tax) / Share holder's fund} × 100]

This ratio is one of the most important ratios used for measuring the overall efficiency of a firm. As the primary objective of business is to maximize its earnings, this ratio indicates the extent to which this primary objective of businesses being achieved. This ratio is of great importance to the present and prospective shareholders as well as the management of the company. As the ratio reveals how well the resources of the firm are being used, higher the ratio, better are the results. The inter firm comparison of this ratio determines whether the investments in the firm are attractive or not as the investors would like to invest only where the return is higher.

**5. Current Ratio:** A liquidity ratio that measures a company's ability to pay short-term financial obligation.

The Current Ratio = Current Assets/Current Liabilities.

The current ratio can give a sense of the efficiency of a company's operating cycle or its ability to turn its product into cash. Companies that have trouble getting paid on their receivables or have long inventory turnover can run into liquidity problems because they are unable to alleviate their obligations.

**6. Debt Equity Ratio:** A measure of a company's financial leverage calculated by dividing its total liabilities by stockholders' equity. It indicates what proportion of equity and debt the company is using to finance its assets.

Debt Equity Ratio= Total Liabilities/ Shareholders Equity.

A high debt/equity ratio generally means that a company has been aggressive in financing its growth with debt. This can result in volatile earnings as a result of the additional interest expense. If a lot of debt is used to finance increased operations (high debt to equity), the company could potentially generate more earnings than it would have without this outside financing. If this were to increase earnings by a greater amount than the debt cost (interest), then the shareholders benefit as more earnings are being spread among the same amount of shareholders. However, the cost of this debt financing may outweigh the return that the company generates on the debt through investment and business activities and become too much for the company to handle. This can lead to bankruptcy, which would leave shareholders with nothing

**7. Inventory Turnover:**

A ratio showing how many times a company's inventory is sold and replaced over a period. The days in the period can then be divided by the inventory turnover formula to calculate the days it takes to sell the inventory on hand or "inventory turnover days."The low ratio is an indicator of the poor sales and high inventory. This ratios also shows the efficiency of management in case of M&A.

Inventory Turnover = Sales/ Inventory.

**8. Days of Working Capital:** An accounting and finance term used to describe how many days it will take for a company to convert its working capital into revenue. The faster a company does this, the better.

it is important to consider how this company has benefited on this count due to M&A. It also shows the efficiency of management

Days working capital= Average Working Capital*365/Annual Sales Revenue.

**9. Selling and Distribution Cost Composition:**

This ratios are calculated to ascertain the relationship that exists between operating expenses and volume of sales and calculated by dividing each item of expense or group of expenses with the net sales so analyze the cause of variation of the operating ratio. It indicates the portion of sales which is consumed by the operating expense.

**Selling and Distribution Cost Composition** = (Selling and distribution expenses / Net sales) × 100

**10. Dividend Pay-out Ratio:** This ratio identifies the percentage of earnings (net income) per common share allocated to paying cash dividends to shareholders. The dividend payout ratio is an indicator of how well earnings support the dividend payment.

Dividend Pay-out Ratio(%)=Dividend per common share/Earning Per Share.

The paired sample t-Test has been used to investigate whether there is any statistically significant difference between the pre and post M&A Accounting Ratio.

*The Accounting ratios analysis is conducted keeping in view the Hypothesis that-*

*$H_{04}$: There is no significant difference between the pre and the post M&A financial performance of the companies are to be investigated in this study.*

**Long Term Performance: Market Based Study**

**Jensen Measure :** A risk-adjusted performance measure that represents the average return on a portfolio over and above that predicted by the capital asset pricing model (CAPM), given the portfolio's beta and the average market return. This is the portfolio's alpha. In fact, the concept is sometimes referred to as "Jensen's alpha. The literature on portfolio performance evaluation suggests that under fairly reasonable conditions, the Jensen measure, which is the intercept from the regression of the firm's excess return on the excess return of a benchmark, provides an appropriate measure of M&A performance .The BSE SENSEX is being selected as the bench- mark in this study. For each acquirer, monthly returns are extracted from Bombay Stock Exchange and Money Control.com for the 36 months beginning the month after the announcement date. These figures are then converted to excess returns by subtracting the yield on 1-month RBI 10 years annualized bond yield ( maturity period of bond is started from,2004-2014) that is 7.12% then converted 0.59% pm .The excess monthly return on stocks of the pharmaceutical firm of India and the excess monthly return on the BSE SENSEX for the same period of time that is 36 month after M&A are calculated as given in following equation (1) and (2) as.

$$R_e = Ri - Rf\,,\ t = 1, 2, 3\ldots 36, \qquad (1)$$

where $R_e$ = excess return for company, $R_i$ monthly return on stocks of respective firms , $R_f$ =Risk free rate of return that is annualized return on 10 years maturity bond issued bu Reserve Bank of India.

The excess returns of benchmark portfolio were obtained using equation

$$R_{me} = Rm - Rf\ \ t = 1, 2, 3\ldots 36, \qquad (2)$$

where $R_{me}$ = excess return on market index *m* in month *t* and Rm = return on market index *m* in month *t*.

By regressing the excess equity returns ($R_e$) on the excess market return ($R_{me}$), the intercepts were obtained for each firms using the following equation:

$$R_{ie} = \alpha i + \beta i R_{me} + \varepsilon i \quad (3)$$

where $\varepsilon it$ = random error with mean zero, $\alpha i$ = the intercept for company *i* measuring abnormal performance (The Jensen Index), and $\beta i$ = sensitivity coefficient of company *i* to market index. if the estimated $\alpha$ (the Jensen index) is positive, it indicate that M&A has positive impact on the long term market based performance of the company. in other words it can be concluded that the firm which have positive and significant Jensen Alpha has beat the market.

**The long term market based studies conducted keeping in view –**

**$H_{05}$: The value of Jensen Measures for the firms investigated in this study is not significant positive**

**The period of Study**

The most important governmental intervention in the pharmaceutical industry is related to the amendment of the Patent Act-1970.Being a signatory of the WTO India is also party to the Agreement on Trade Related Intellectual Property Rights(TRIPS) .In order to honor its commitment under TRIPS ,Indian Government introduce products patent from January 1,2005,trough the passage of the Patent Act ( Third Amendment) in March 2005.This World Trade Organization's TRIPS regime gave impetus to major restructuring of pharmaceutical companies. This industry faced a wave of M&A to come to terms with new WTO dispensation. Therefore, M&A taken place in the period of starting from 2004 to 2010 have been investigated in this study.

**4.7: Sample frame:**

The financial data of the companies investigated in this study are taken from the BSE SENSEX and the Money control.

**Conclusion:**

The analysis of M&A in holistic manner needed an integrated perspective in which the evidence of successful and unsuccessful deal should be analyzed from all possible methods .Thus different methodologies integration in the model discussed in this chapter is an attempt which can serve the purpose of analyzing the corporate M&A deals in the given context of the current study in integrated manner, and the model developed in this study can also be tested in future in analysis of M&A deals in different industries ,other than the Pharmaceutical Industry discussed in this study in order to make a generic benchmark model for studying M&A in future.

# Chpater-5

## Analysis & Interpretation

### Introduction:

As discussed in the previous chapter researcher has adopted an integrated research methodology consisting different approach such as Expert opinion, Case Studies, Event Study, Accounting Ratios & Jensen Measure.

To ease the analysis of result the chapter has been divided into five sections such as –

**Section A: Expert Opinion**

**Section B: Case Studies Analysis**

**Section C: Event Study Analysis**

**Section D: Accounting Ratio Analysis**

**Section E: Jensen Measure.**

### Section A: Expert Opinion

There are twenty synergy value drivers have been identified on the basis of data obtained from the researchers as given in table below ----.The importance of the expected synergy drivers in case of M&A undertaken by Indian Pharmaceutical Firms has been decided in terms of the mean rating values of drivers given by respondents. The most important drivers /variable is $X_6$ (mean 3.9, Std .33) that is- "To take off fast in the line of business selected by minimizing any gestation period" and the least important drivers/variable is $X_{31}$ (mean, 2.04, std, 0.89) that is –corporate culture improvement after M&A .The first twenty synergy drivers have been obtained and listed in the table (5.1) below-

Table: 5.1

| Variables | Sum | Mean | Std | Median | Mode |
|---|---|---|---|---|---|
| X6 | 66 | 3.88235 | 0.33211 | 4 | 4 |
| X9 | 63 | 3.70588 | 0.46967 | 4 | 4 |
| X10 | 61 | 3.58824 | 0.61835 | 4 | 4 |
| X12 | 57 | 3.35294 | 0.86177 | 4 | 4 |
| X8 | 55 | 3.23529 | 0.75245 | 3 | 3 |
| X14 | 53 | 3.11765 | 0.92752 | 3 | 4 |
| X38 | 52 | 3.05882 | 0.89935 | 3 | 3 |
| X26 | 50 | 2.94118 | 0.96635 | 3 | 3 |
| X23 | 50 | 2.94118 | 0.74755 | 3 | 3 |
| X14 | 49 | 2.88235 | 0.48507 | 3 | 3 |
| X20 | 48 | 2.82353 | 0.72761 | 3 | 3 |
| X7 | 47 | 2.76471 | 0.90343 | 3 | 3 |
| X38 | 46 | 2.70588 | 1.0467 | 3 | 3 |
| X14 | 45 | 2.64706 | 0.99632 | 3 | 3 |
| X15 | 43 | 2.52941 | 0.94324 | 3 | 3 |
| X16 | 42 | 2.47059 | 1.06757 | 3 | 3 |
| X17 | 41 | 2.41177 | 1.06412 | 2 | 3 |
| X27 | 40 | 2.35294 | 0.86177 | 2 | 3 |
| X29 | 37 | 2.17647 | 1.0146 | 2 | 2 |
| X31 | 35 | 2.05882 | 0.89935 | 2 | 2 |

**Source: own**

**Section B: Case Studies Analysis**

Only 15 out of all M&A undertaken by Indian pharmaceutical firms from 2004-2010 have been discussed in this study. These cases have been selected largely on the basis of availability of data. For the sake of comprehensive understanding of M&A in Indian pharmaceutical Industry the cases have been divided into three groups as-

Group1; Domestic-Domestic (The Acquirers and Target Both are Indian)

Group2: Domestic-Foreign (The acquirers are Indian and the Targets are Foreign)

Group3: Foreign-Domestic (The Acquirers are Foreign and the Targets are Indian)

**Table: 5.2**

| Groups | Cases | Acquirier | Target |
|---|---|---|---|
| 1 | A | Arch Pharmalabs Limited (APL | Avon Organics Limited |
| | B | Aurobindo Pharma | Trident Life Sciences Ltd |
| | C | Emami Ltd | Zandu Ltd |
| | D | Matrix Laboratorie Ltd | Vera Laboratories |
| | E | Zydus Cadila Ltd | Biochem |
| 2 | A | Dr Reddy Ltd | Betapharm |
| | B | Sun Pharma Ltd | Taro Pharma |
| | C | Ranbaxy Ltd | Terapia |
| | D | Plethico | Natrol |
| | E | Shilpa Medicare | LOBA |
| | F | Marksans Pharma | Hale Group |
| 3 | A | Fresenius Kabi | Dabur Pharma |
| | B | Mylan Laboratories | Matrix Laboratories |
| | C | Daiichi Sankyo Co. Ltd | Ranbaxy Laboratories Ltd |
| | D | Hospira, Inc | Orchid Chemicals & Pharmaceuticals Ltd. |

**Source: own**

The cases discussed are based on the information collected from different source such as Company's Financial Reports, Media Reports and Business Magazine. The major references on which the cases are based is given in the table 5.3 as-

| Group | Case | Major Sources |
|---|---|---|
| 1 | A | http://articles.economictimes.indiatimes.com http://pharma.financialexpress.com.http://www.business-standard.com |
| | B | http://www.livemint.com.http://www.stockwatch.in.http://www.thehindu.com |
| | C | http://www.papercamp.com,http://www.indiainfoline.com http://www.business-standard.com,**http://www.cfoinstitute.com** http://www.thehindubusinessline.in |
| | D | http://www.business-standard.com,http://articles.economictimes.indiatimes.com |
| | E | http://www.deccanherald.com,http://www.moneycontrol.com |
| 2 | A | http://prezi.com,http://www.boddunan.com |
| | B | http://www.businesswire.com,http://www.capitalmarketplus.com |
| | C | http://www.rediff.com/money/report/ran/20060329.htm http://archive.indianexpress.com,http://www.hindu.com,http://www.thehindubusinessline.com ,http://nrao-m-a-handbook.blogspot.in |
| | D | www.crisil.com ,www.**plethico**.com/addons%5CResearch_Report_Crisil.pdf |
| | E | http://www.businesswire.com |
| | F | http://www.business-standard.com,ww.economicstimes.com |
| 3 | A | http://www.thehindubusinessline.com ,http://www.fresenius.com/234_1916.htm |
| | B | http://www.sec.gov,http://articles.economictimes.indiatimes.com http://www.prnewswire.com |
| | C | www.scopeknowledge.com |
| | D | http://www.hospirainvestor.com,http://www.prnewswire.com |

**Source: own**

**Table:5.4 Group1: Case-A**

| Deal Year | Acquirer | Origin | Target | Origin | Deal Value | Mode Acquisition |
|---|---|---|---|---|---|---|
| Nov 7, 2006 | Arch Pharmalabs Limited (APL | India | Avon Organics Limited | India | NA | NA |

Source: www.economicstimes.com, www.business-standard.com

An active pharmac injected manufacturer i.e. Arch Pharma Labs Ltd. (APL) basically based in Mumbai with its production units at Sholapur, Hyderabad. APL's acquisition of Avon organic limited took place in 2006. Avon was facing financial crunch. The Avon's acquisition by APL was a strategic move to integrate its management and operational product sales and eventually APL will get tax shelter in the process of carrying the loses of Avon Organics.

According to Avon Organics executive director, Rajesh Agarwal, Business Standard ( Nov 6,2007) "the entry of APL's management in Avon will facilitate the latter's various product group sales. Certain products and the positioning of both the companies will help unleash synergy across all functions,"

**Table: 5.5 Group1: Case -B**

| Deal Year | Acquirer | country | Target | Origin | Deal Value | Mode Acquisition |
|---|---|---|---|---|---|---|
| September 30, 2009 | Aurobindo Pharma | India | Trident Life Sciences Ltd | India | Rs 38.8 crores | |

Source: www.livemint.com, www.stockwatch.in,www.thehindu.com

Aurobindo Pharma Limited's decision to acquire Trident Life Science in September 2009 was another move to expand its target business opportunities. No doubt such moves raise concerns as transactions between companies remains many a time unleash. Aurobindo Pharma Limited
was founded by M.P. V. Reddy in Pondicherry. In 1992 it become public company and in 1995 listed its shares in Indian Stock Exchange. APL gradually became market leader in semi synthetic Pavilions and startled making its presence fact in neurosciences, cardiovascular, anti-retroviral, anti-diabetic gastroenterology and cephalosporin. The main strategy behind acquisition of Tridents Ltd which was later known as AXIS Ltd operated itself as subsidiary of APL. Firstly it will help, is to expand its capacity to make high-value sterile injectables Aurobindo itself has enough capacity for injectables, but needs additional capability for non-oncological and non-infective injectables . Secondly , the acquisition boost to meet challenges of existing agreement licensing and target more such business opportunities

**Table5.6 Group1: Case-C**

| Deal Year | Acquirer | Origin country of Acquirer | Target | Origin | Deal Value | Mode Acquisition |
|---|---|---|---|---|---|---|
| 2008 | Emami | India | Zandu | India | NA | Share Purchase |

Source: www.papercamp.com

Emani Ltd was set up by RS Agarwal and RS Goenka in Kolkata in 1974 with a name 'Kenco Chemicals'. The company manufactured cosmetic products as well as Ayurwedic medicines eludes the brand name "Emani" Later in 1995 Kenco Chemicals was converted into public limited company under the name and style of Emani Limited. On the other hand Zandu (India) P. Ltd. Manufactured Ayurvedic health. Cheminals and cosmetic. Actually Zandu Produced more than 300 health-care promoting products, chemicals and cosmetics. In 1920s it becomes a public company. In the year 1930 started new production of allopathic medicines. Company also bagged many awards and prizes like Excellence in brand building, first prize in business exhibition, Products of Zandu was termed as super brand in India which was given by Brand Organization, London.

In 2008 Emani acquired Zandu Keeping in view all the benefits and productivity of Zandu. For example keeping in view the 100 years old high brand value of Zandu secondly, product range almost 300 products, Thirdly Zandu debt company. Fourthly, a leader in Ayurvadic health care. Fifthly, international FMCG player. Lastly along with many other benefits Emani expected operational synergies, profitability optimism manufacturing facilities with consolidated distribution and sales channels of the two companies.

**Table:5.7Group1: Case-D**

| Deal Year | Acquirer | country | Target | Origin | 28.47 | Mode Acquisition |
|---|---|---|---|---|---|---|
| March 29.2004 | Matrix Laboratories | India | Vera Laboratories | India | 28.47 | NA |

Source: www.business-standard.com

The acquisition of Vera Laboratories Ltd (India) by Matrix Laboratories took place in 2004. The acquisition as per business analysts was a well planned strategically move made by Matrix Laboratories. Because Vera Laboratories (Vishakhapatnam) has been approved by US FDA.

As reported in, Business Today (March 30, 2004) N Prasad, chairman and chief executive

"The move to merge loss-making Vera with itself was strategic. Vera's manufacturing facilities are US FDA-approved and have a small volume production block to facilitate manufacturing of low volume and high-value products. It will be a perfect fit for our business as there are no overlapping products between the two, it is difficult to get the US FDA-approved facilities and this is a very important acquisition. Significantly the deal will a help in improving the already strong presence of Matrix in regulated markets by servicing its customers without any capacity constraints. The Vera acquisition also helped Matrix de-risk its operations in India from a pollution view point. Vera is located in a declared chemical zone in Vizag, while all our four manufacturing locations are in Hyderabad. They have the latest effluent treatment facility and we expect to transfer some of our difficult manufacturing processes to this unit soon".

**Table:5.8 Group1: Case-E**

| Deal Year | Acquirer | country | Target | Origin | Deal Value | Mode of Payment |
|---|---|---|---|---|---|---|
| 21 Dec ,2011 | Zydus Cadila | India | Biochem | India | NA | NA |

Source: thehindubusinessline.com

Zyaus Cadilla (India) acquired Biochem (India) in 2011. Biochem was established in 1959 had proved its strength in manufacturing and marketing of antibiotics with the passage of time. Biochem become well integrated pharma company in the field of antibiotics, cardiovascular, anti-diabetics and oncology segment. In 2010-11 it crossed sales of $ 42.2 million. So, indirectly acquisition strengthened Zydus operation in following ways:

As reported in Business Standard(Dec,2011) Zydus Cadila's Chairman and Managing Director, Pankaj R Patel "The formulations business in India has always been the bulwark of our operations and we have looked at every strategic opportunity to grow and contribute to this market, either by way of novel initiatives, collaborations or acquisitions. Biochem represents the right fit as they have a significant presence in our core therapy areas and also add value to our product offerings in the key growth segments."

**Table:5.9 Group2: Case-A**

| Deal Year | Acquirer | Origin | Target | Origin | Deal Value | Mode |
|---|---|---|---|---|---|---|
| 16th Feb 2006 | Dr Reddy | India | Betapharm | Germany | INR 2550 crore | Cash |

Source: www.prezi.com,www.hindubusinessline.com

Dr Reddy acquired Betapharma (Germany) in 2006 which was of fourth largest amongst top ten largest overseas acquisition by Indian pharmaceutical companies .The opportunity of acquisition was grabbed by DRL keeping in mind the need of global expansion . Betapharma had strong marketing infrastructure in Germany which would also become vehicle to launch DRL's products overseas not only in German market but whole European markets. because the largest share of generic drugs market held by German pharmaceutical companies because ageing population coupled with increasing cost of healthcare gave an golden opportunity to DRL to tape European's generic market. This acquisition was expected to help Betapharma to develop its competitive position in Germany by taking advantage of competitive cost of DRL .The deal also helped DRL to diversify its business as that time it was facing pressure in US generic Market.

**Table:5.10 Group2: Case-B**

| **Deal Year** | **Acquirer** | **country** | **Target** | **Origin** | **Deal Value** | **Mode Acquisition** |
|---|---|---|---|---|---|---|
| May 21, 2007 | **Sun Pharma** | **India** | **Taro Pharm a** | Israel | **USD 454** | **Cash** |

Source: www.businesswire.com

**Sun Phrmaceutical Ltd established in 1983 is an** international, integrated, specialty pharmaceutical company .It manufactures and markets a large basket of pharmaceutical formulations as branded as well as generics in India, US and several other markets across the world. Sun pharma acquired Taro in 2007 with a strong belief that two companies not only add value definitely will complement Sun's business .Taro's expertise in dermatology ,pediatrics along with generic pharmaceuticals, and over-the-counter products will complement the team of Sun pharma this will further boost number of products of higher complexity .Evidently Sun waited to encash the talent that had supported Taro's three entities Taro Israel ,Taro Canada and Taro US.

**Table:5.11 Group2: Case-C**

| Deal Year | Acquirer | country | Target | Origin | Value | Mode Acquisition |
|---|---|---|---|---|---|---|
| June 8, 2006 | Ranbaxy | India | Terapia | Romania | $324 million | Share Purchase |

Source: ww.rediff.com/money/2006/mar/29ran.htm,

Ranbaxy laboratories Ltd acquired the largest overseas generic drug companies of Romania i.e Trepia in 2006.The combined strength of

Ranbaxy and Trepia would allow to expand its base through Romania, European Unions and CIS Markets. Acquisition would pave the path to become among the five global generic companies .The strength of two premier company allow Ranbaxy to leverage its expanded base in the rapidly growing Romanian Pharma market .Next it will unleash new opportunities in Romania. Further the acquisition will establish a position in market and will also provide a platform to introduce new products. Trepia has two manufacturing location and would become manufacturing location for Ranbaxy after the acquisition Ranbaxy gains access to Trepia's 157 products basket and marketing authorization for several products. Terapia has a highly skilled expert labor force covering all the functions needed in a modern, integrated, branded generics business.

Trepia was recognized as a strong capable management team with authentic track record in new developing new products ,quality marketing ,etc.

**Table:5.12 Group2: Case-D**

| Deal Year | Acquirer | country | Target | Origin | Deal Value | Mode |
|---|---|---|---|---|---|---|
| Nov 7, 2006 | Plethico | India | Natrol | USA | US$ 80.8 mn | NA |

Source:www.plethico.com/addons%5CResearch_Report_Crisil.pdfPlethico

Pharmaceuticals was founded in 1963 at Indore engaged in the manufacturing of herbal formulations, nutraceuticals and allopathic products. Plethico's acquisition of Natrol Inc, a Nasdaq-listed company, in October 2007 was expected to provide access to the largest nutraceutical market - the US. Natrol offering of more than seventy categories of leading branded products in US market including nutraceuticals, lifestyle-related preventive supplements and food products,etc would provide an opportunity to Plethico to enlarge its baskets of products.

Further, the strong network of more than 54000 distribution points of Natrol will also help Plethico to establish in US market and Natrol exposures to largest key global nutraceuticals products market are expected to help Plethico to have access in these markets at easier regulatory compliance.

**Table 5.13Group2: Case-E**

| Deal year | Acqurier | Origin | Target | Origin | Value |
|---|---|---|---|---|---|
| Oct.15, 2007 | Shilpa | **India** | LOBA | Austria | |

Source: www.businesswire.com

Shilpa Medicare Ltd is among India's leading manufacturers related to oncology segment.The acquisition of LOBA by Shilpa Medicare, took place in 2007. The product range of more than five hundred coupled with long-standing customer relationships in highly regulated markets, and internationally certified and compliant R&D and manufacturing facilities, LOBA is a perfect strategic fit for Shilpa Medicare.

Shilpa Medicare's highly skilled talent pool and low operational costs, the Shilpa-LOBA combination would be a formidable entity in the global oncology and CRAMS sectors.

**Table 5.14Group2: Case-F**

| Deal Year | Acquirer | Origin | Target | Origin | Value | Mode |
|---|---|---|---|---|---|---|
| 7,Jan,2008 | Marksans | **India** | Hale | **UK** | **NA** | **NA** |

Source: http://www.business-standard.com

Marksans Pharma is a global pharmaceutical company with its headquartered at Mumbai which is actively engaged in R&D and offer CRAMS to global pharmaceutical companies.The acquisition of Hale Group(UK) in 2008 by Marksans Pharma was a strategic move acquire key global business .Hale Group also has approvals of US FDA ,UK MHIA ,Australian TGO and other foreign health authorities.So, acquisition of Hale Group a subsdiariy of parent company Bell ,Sons & Co.was in line with Markansas Ltd business.Markansas Ltd was expected to have access to 34 products of Hale Group.

The Markansas Ltd also would gain of Hale Group's more than 80 years expertise and reach across more than fifty countries .

Therefore, the acquisition of Hale Group by Markansas would add value in every sense.

**Table 5.15 Group3: Case-A**

| Deal Year | Acquirer | Origin | Target | Origin | Value | Mode |
|---|---|---|---|---|---|---|
| April 20,2008 | Fresenius Kabi | Singapore | Dabur | India | INR 8,782 million | 76.50 per share in cash |

Source: http://www.fresenius.com

Fresinus Kabi Oncology Limited came into existence in 2008 .Prior to this it was known as Fresinus Kabi (Singapore) a subsdiary of FKAG .Germany . The acquisition of Dabur Pharmaceutical Ltd in 2008 lead to making of FK O L .To continue its growth and India as an extremely important market as healthcare expenses are growing here .Dabur pharma has a substantial number of drugs registration in Asia .Europe and US . As reported by Business Hindu Line,dated. April20, ,2008 the comment of Mr Baule ,CEO, "India is an extremely important market. It's one of the fastest growing pharma markets in the world. India is getting richer and richer, so healthcare expenses are growing here," Mr Baule said.

Fresenius Kabi , which provides patients in many countries in Europe with an outpatient nutrition therapy service, this deal was expected broaden Dabur Pharma's patient-specific oncology therapies and help it expand its drug portfolioology Limited.

**Table 5.16Group3: Case-B**

| Deal Year | Acquirer | Origin | Target | Origin | Deal Value | Mode of Payment |
|---|---|---|---|---|---|---|
| August 28, 2006 | Mylan | USA | Matrix | India | $736 million | Rs. 306 per Matrix share |

Source:ww.prnewswire.com.

Mylan Laboratories Ltd is a leading pharmaceutical company with its origin in USA .Mylan develops license, markets and distribution channels extensively for generic products API.

On the other hand Matrix Ltd (India) a public Limited company engaged in Manufacturing of Active Pharmaceutical Ingredient and Solid Oral Dosage

Forms. Matrix as fastest growing manufacturer focused on regulated markets such as US& EU.

The Acquisition of Matrix Lab(India) by Mylan Lab (USA) in 2006 was a well planned deal to expand and strengthen the company's core business ,competencies and capabilities.Secondly it was calculated more to increase financial performance of Mylan Lab.

The expected gains to the Matrix due to this deal was .N. Prasad, Executive Chairman of Matrix( as reported in PR News wire ), said, "Mylan, a proven industry leader, is an ideal partner for Matrix. Our strategic vision remains unchanged and we believe this transaction creates greater growth opportunities for Matrix and its employees and also will allow us to accelerate our existing expansion plans in India and abroad". Matrix will benefit from a strong U.S. presence, expanded production capabilities and manufacturing capacity, and industry-leading expertise in product development and process optimization.

**Table 5.17Group3: Case-C**

| **Deal Year** | **Acquirer** | **Origin** | **Target** | **Origin** | **Deal Value** | **Mode Acquisition** |
|---|---|---|---|---|---|---|
| 11 June 2008 | Daiichi Sankyo Co. Ltd | **Japan** | Ranbaxy Laboratories Ltd | **India** | USD 4.6 billion | **NA** |

**Source:** www.scopeknowledge.com

Daichii Sankyo Co Ltd's (Japan) acquisition of Ranbaxy (India) in 2008 was to provide combined with a broader products base. Daichii Ltd was expected get benefits with low cost manufacturing infrastructure and supply chain of Ranbaxy .On the other hand Ranbaxy's expected key synergistic gains were R&D and expertise of Daichii. The biggest gain for Ranbaxy is its access to the Japanese market, being part of Daiichi Sankyo. The deal was important for Ranbaxy is to become the largest player in Japan's generic drugs market, for which the company was eyeing organic and inorganic routes.Both the companies expected to create substantial synergies in the long term.

**Table 5.18 Group3: Case-D**

| Deal Year | Acquirer | Origin | Target | Origin | Deal Value | Mode |
|---|---|---|---|---|---|---|
| Dec 15. 2009 | Hospira, Inc | USA | Orchid Ltd. | India | $400 million | |

Source: www.prnewswire.com

Hospira, Inc(USA) is a global specialty pharmaceutical and medication delivery company dedicated itself to Advancing Wellness(TM). Orchid Chemicals & Pharmaceuticals Ltd. is a leading pharmaceutical company headquartered in Chennai, India, known as manufacture and marketing of diverse bulk actives, formulations and nutraceuticals.Orchid export spane over seventy five countries and its amongst top five cephalosporin producers in the world.

The acquisition took place in 2009 by Hospira, Inc(USA) which was based on product development and commercial relation between the two companies.

According to Mr K Raghavendra Rao, managing director, Orchid as reported in hospirainvestor press release (Dec 15, 2009) "This transaction and the long-term API contract are a testimony to the competitiveness of Orchid's product portfolio in the global pharmaceuticals landscape, and its established capabilities in aseptic product manufacture. We are confident that Hospira will take our generic injectable pharmaceuticals business to even greater heights and provide enhanced career prospects to the employees being transferred. This transaction will provide Orchid with the financial flexibility to pursue new growth opportunities, and build upon our successful track record of value creation for our shareholders,"

**Section C: Event Study Analysis**

The market response to the announcement day of M&A of the select cases in Indian Pharmaceutical Industry has been analyzed for Event Windows (-20,20) using market parameters of estimation period which is -250 days . The Actual Return ($R_e$), Expected Return ( $E_r$) ,Abnormal Return (AR) and Cumulative Abnormal Return (CAR) are computed for each Event Window Days of each case except two cases (Group1CaseA and Group2 Case D) in order to analyse the market response before and after the event.

The Market response of event days for each case is given in the following tables as-

| Table 5.19 Group1 Case B | | | | |
|---|---|---|---|---|
| Event Days | Re | Er | Ar | CAR |
| -20 | 0.43% | -0.65% | 1.08% | 1.08% |
| -19 | 3.06% | 0.58% | 2.49% | 3.57% |
| -18 | 3.31% | 0.82% | 2.49% | 6.06% |
| -17 | -0.73% | 0.33% | -1.06% | 5.00% |
| -16 | -1.80% | -1.53% | -0.27% | 4.74% |
| -15 | -1.61% | -1.87% | 0.26% | 5.00% |
| -14 | -1.44% | -0.31% | -1.14% | 3.86% |
| -13 | 0.54% | 1.04% | -0.50% | 3.37% |
| -12 | -0.11% | 0.66% | -0.77% | 2.59% |
| -11 | 3.53% | 0.13% | 3.40% | 5.99% |
| -10 | 2.22% | -1.03% | 3.25% | 9.24% |
| -9 | 4.10% | 1.55% | 2.55% | 11.79% |
| -8 | -0.56% | -0.30% | -0.26% | 11.53% |
| -7 | -4.94% | -3.44% | -1.50% | 10.03% |
| -6 | -2.17% | -1.11% | -1.06% | 8.97% |
| -5 | -3.39% | -0.69% | -2.70% | 6.27% |
| -4 | 1.64% | 2.22% | -0.58% | 5.69% |
| -3 | -3.15% | -0.52% | -2.63% | 3.06% |
| -2 | 2.06% | 1.09% | 0.97% | 4.04% |
| -1 | -3.57% | -1.31% | -2.26% | 1.78% |
| 0 | -2.82% | -1.61% | -1.21% | 0.57% |
| 1 | -1.45% | -1.56% | 0.11% | 0.68% |
| 2 | -0.21% | -0.50% | 0.29% | 0.97% |
| 3 | 1.22% | 2.09% | -0.87% | 0.10% |
| 4 | 5.66% | 1.46% | 4.20% | 4.30% |
| 5 | 1.46% | -0.24% | 1.70% | 6.00% |
| 6 | 5.08% | 1.90% | 3.18% | 9.18% |
| 7 | -1.85% | -0.49% | -1.36% | 7.82% |
| 8 | -3.35% | 0.80% | -4.15% | 3.67% |
| 9 | -1.83% | -0.41% | -1.42% | 2.25% |
| 10 | -0.63% | -1.44% | 0.81% | 3.06% |
| 11 | 1.64% | 1.47% | 0.17% | 3.23% |
| 12 | -1.41% | -0.83% | -0.58% | 2.65% |
| 13 | -2.79% | -0.85% | -1.93% | 0.71% |
| 14 | 0.53% | 0.59% | -0.06% | 0.65% |
| 15 | -0.86% | 1.35% | -2.21% | -1.55% |
| 16 | 1.73% | 0.02% | 1.71% | 0.16% |
| 17 | 3.80% | 2.25% | 1.55% | 1.71% |
| 18 | -0.35% | -0.59% | 0.24% | 1.94% |
| 19 | 1.72% | -1.15% | 2.87% | 4.82% |
| 20 | -0.65% | -0.21% | -0.44% | 4.38% |

Source of data: www.moneycontrol.com

The Event Day Abnormal Return for this case was (-1.21%) with cumulative AR for (-20,20) event windows was 4.38%

| Table 5.20 Group1 Case C | | | | |
|---|---|---|---|---|
| Event Days | Re | Er | Ar | CAR |
| -20 | -2.04% | 0.11% | -2.15% | -2.15% |
| -19 | 4.14% | -0.29% | 4.43% | 2.28% |
| -18 | -0.62% | 0.29% | -0.91% | 1.37% |
| -17 | -1.97% | 0.00% | -1.97% | -0.60% |
| -16 | 2.62% | -0.32% | 2.95% | 2.35% |
| -15 | -2.11% | -0.41% | -1.70% | 0.65% |
| -14 | 6.36% | 0.46% | 5.90% | 6.54% |
| -13 | -5.92% | 0.38% | -6.30% | 0.25% |
| -12 | 7.84% | -0.44% | 8.28% | 8.52% |
| -11 | -0.77% | -0.69% | -0.08% | 8.45% |
| -10 | -4.76% | 0.02% | -4.79% | 3.66% |
| -9 | -4.23% | -0.30% | -3.93% | -0.27% |
| -8 | -2.61% | -0.88% | -1.73% | -2.00% |
| -7 | -1.87% | 1.24% | -3.11% | -5.11% |
| -6 | -1.34% | 0.38% | -1.72% | -6.83% |
| -5 | 14.19% | -0.70% | 14.89% | 8.06% |
| -4 | -1.32% | -0.15% | -1.16% | 6.89% |
| -3 | -15.40% | -0.68% | -14.72% | -7.82% |
| -2 | 13.17% | 0.52% | 12.65% | 4.82% |
| -1 | -6.92% | 0.81% | -7.73% | -2.91% |
| 0 | 1.04% | -0.55% | 1.58% | -1.32% |
| 1 | 1.48% | -0.42% | 1.90% | 0.57% |
| 2 | -0.44% | -1.44% | 1.01% | 1.58% |
| 3 | -4.38% | -0.16% | -4.22% | -2.64% |
| 4 | 3.97% | 1.01% | 2.96% | 0.31% |
| 5 | -4.97% | 0.22% | -5.19% | -4.87% |
| 6 | 3.93% | 1.36% | 2.57% | -2.30% |
| 7 | -1.49% | 0.98% | -2.47% | -4.77% |
| 8 | -5.61% | 0.57% | -6.18% | -10.95% |
| 9 | 1.58% | -0.55% | 2.12% | -8.82% |
| 10 | -3.52% | -0.40% | -3.12% | -11.94% |
| 11 | 4.33% | 0.50% | 3.83% | -8.11% |
| 12 | -3.39% | 0.99% | -4.39% | -12.50% |
| 13 | -1.45% | -0.81% | -0.65% | -13.14% |
| 14 | 1.97% | -0.29% | 2.26% | -10.88% |
| 15 | -0.48% | -0.07% | -0.41% | -11.29% |
| 16 | -1.59% | 0.01% | -1.60% | -12.89% |
| 17 | -2.98% | -0.40% | -2.58% | -15.47% |
| 18 | -0.58% | -0.11% | -0.47% | -15.94% |
| 19 | -2.06% | -0.38% | -1.68% | -17.61% |
| 20 | 7.37% | 0.96% | 6.41% | -11.20% |

Source of data: www.moneycontrol.com

The Abnormal Return on the Event Day for this case was (1.58%) with cumulative AR for (-20,20) even window was (-11.20%)

| Table 5.21 Group1 Case D | | | | |
|---|---|---|---|---|
| Event Days | Re | Er | Ar | CAR |
| -20 | -0.98% | 2.17% | -3.15% | -3.15% |
| -19 | 1.77% | 0.77% | 1.00% | -2.14% |
| -18 | -1.73% | 0.32% | -2.05% | -4.19% |
| -17 | -0.53% | 1.22% | -1.75% | -5.94% |
| -16 | 0.51% | 1.12% | -0.61% | -6.55% |
| -15 | 2.64% | -0.24% | 2.88% | -3.67% |
| -14 | -1.11% | -0.32% | -0.79% | -4.46% |
| -13 | -1.10% | -0.52% | -0.58% | -5.04% |
| -12 | -2.15% | 1.10% | -3.25% | -8.29% |
| -11 | -2.63% | -1.24% | -1.39% | -9.67% |
| -10 | -4.40% | 0.58% | -4.98% | -14.65% |
| -9 | -1.76% | 0.74% | -2.49% | -17.14% |
| -8 | 0.15% | -0.68% | 0.84% | -16.31% |
| -7 | -1.16% | 0.88% | -2.04% | -18.35% |
| -6 | -4.89% | -0.25% | -4.64% | -22.99% |
| -5 | 2.69% | 0.96% | 1.72% | -21.26% |
| -4 | -3.44% | 0.52% | -3.96% | -25.23% |
| -3 | 2.07% | 0.78% | 1.28% | -23.95% |
| -2 | -1.43% | 1.80% | -3.23% | -27.18% |
| -1 | 0.80% | 1.02% | -0.23% | -27.40% |
| 0 | 0.11% | 0.05% | 0.05% | -27.35% |
| 1 | -0.42% | 1.31% | -1.73% | -29.08% |
| 2 | 0.70% | 2.13% | -1.43% | -30.51% |
| 3 | -0.44% | 1.06% | -1.50% | -32.01% |
| 4 | 0.06% | 1.08% | -1.02% | -33.03% |
| 5 | -0.13% | 0.42% | -0.56% | -33.59% |
| 6 | 0.66% | 0.51% | 0.16% | -33.43% |
| 7 | 1.61% | 0.81% | 0.80% | -32.63% |
| 8 | -1.87% | 0.04% | -1.91% | -34.54% |
| 9 | -0.23% | 1.79% | -2.02% | -36.56% |
| 10 | 0.49% | -0.01% | 0.51% | -36.05% |
| 11 | 1.45% | 0.77% | 0.69% | -35.37% |
| 12 | -1.25% | 0.57% | -1.82% | -37.19% |
| 13 | 0.63% | -0.02% | 0.65% | -36.53% |
| 14 | -1.50% | 0.62% | -2.12% | -38.65% |
| 15 | 1.72% | 1.29% | 0.42% | -38.23% |
| 16 | 6.67% | 1.05% | 5.62% | -32.61% |
| 17 | 0.98% | 0.59% | 0.39% | -32.22% |
| 18 | -0.21% | -1.50% | 1.30% | -30.92% |
| 19 | 0.12% | 0.59% | -0.46% | -31.39% |
| 20 | 0.71% | 0.13% | 0.58% | -30.80% |

Source of data: www.moneycontrol.com

The AR for Event Day was (.05%) with cumulative AR for the Event Window (-20,20) is (-30.80%)

| Table 5.22Group-2 Case-A | | | | |
|---|---|---|---|---|
| Event Days | Re | Er | Ar | CAR |
| -20 | 1.19% | 0.12% | 1.07% | 1.07% |
| -19 | 0.13% | -0.04% | 0.17% | 1.24% |
| -18 | -0.20% | 0.56% | -0.76% | 0.48% |
| -17 | 0.12% | 0.26% | -0.14% | 0.34% |
| -16 | 1.30% | 0.00% | 1.30% | 1.63% |
| -15 | 3.80% | 0.29% | 3.51% | 5.14% |
| -14 | -0.86% | 0.39% | -1.24% | 3.90% |
| -13 | 5.33% | 0.48% | 4.84% | 8.74% |
| -12 | -0.97% | 0.07% | -1.04% | 7.70% |
| -11 | 5.21% | 0.25% | 4.96% | 12.65% |
| -10 | -0.34% | 0.00% | -0.34% | 12.32% |
| -9 | -1.18% | 0.09% | -1.27% | 11.05% |
| -8 | 2.62% | -0.08% | 2.70% | 13.74% |
| -7 | 2.34% | 0.59% | 1.75% | 15.49% |
| -6 | -2.19% | 0.31% | -2.50% | 12.99% |
| -5 | 1.12% | 0.04% | 1.07% | 14.06% |
| -4 | -1.22% | 0.24% | -1.46% | 12.60% |
| -3 | -1.87% | 0.23% | -2.11% | 10.49% |
| -2 | 0.36% | -0.05% | 0.41% | 10.90% |
| -1 | 9.79% | 0.19% | 9.61% | 20.51% |
| 0 | 3.49% | -0.16% | 3.65% | 24.16% |
| 1 | 4.33% | 0.31% | 4.02% | 28.18% |
| 2 | -2.29% | 0.29% | -2.58% | 25.60% |
| 3 | 0.39% | 0.22% | 0.17% | 25.77% |
| 4 | -4.06% | 0.15% | -4.22% | 21.55% |
| 5 | 0.63% | 0.03% | 0.60% | 22.15% |
| 6 | -0.98% | 0.27% | -1.25% | 20.90% |
| 7 | 1.52% | 0.28% | 1.24% | 22.14% |
| 8 | -0.77% | 0.48% | -1.25% | 20.89% |
| 9 | 0.83% | 0.23% | 0.60% | 21.49% |
| 10 | 0.01% | 0.06% | -0.05% | 21.44% |
| 11 | -1.28% | 0.37% | -1.65% | 19.79% |
| 12 | -0.21% | 0.10% | -0.31% | 19.48% |
| 13 | 2.17% | -0.27% | 2.44% | 21.92% |
| 14 | 1.40% | 0.23% | 1.16% | 23.08% |
| 15 | 0.64% | 0.46% | 0.18% | 23.26% |
| 16 | 0.23% | 0.18% | 0.05% | 23.31% |
| 17 | -0.88% | 0.11% | -0.99% | 22.32% |
| 18 | -0.17% | 0.25% | -0.42% | 21.89% |
| 19 | 1.16% | 0.08% | 1.07% | 22.97% |
| 20 | -0.38% | 0.26% | -0.64% | 22.33% |

Source of data: www.moneycontrol.com

The Abnormal Return for Event Day was (3.65%) whereas the Cumulative AR was (22.33%) for the Event Window (-20,20)

| Table 5.23 Group-2 Case-B | | | | |
|---|---|---|---|---|
| Event Days | Re | Er | Ar | CAR |
| -20 | 1.85% | 0.57% | 1.28% | 1.28% |
| -19 | -11.20% | 0.16% | -11.36% | -10.08% |
| -18 | 1.36% | 0.44% | 0.92% | -9.16% |
| -17 | -0.05% | 0.24% | -0.28% | -9.44% |
| -16 | 0.83% | 0.13% | 0.70% | -8.74% |
| -15 | -3.25% | -0.40% | -2.85% | -11.59% |
| -14 | -0.86% | 0.05% | -0.91% | -12.50% |
| -13 | -0.41% | 0.44% | -0.85% | -13.35% |
| -12 | -2.02% | -0.12% | -1.90% | -15.25% |
| -11 | 1.05% | 0.02% | 1.03% | -14.23% |
| -10 | -0.71% | -0.08% | -0.63% | -14.86% |
| -9 | 0.44% | 0.13% | 0.30% | -14.56% |
| -8 | -1.43% | 0.09% | -1.52% | -16.07% |
| -7 | -1.82% | 0.15% | -1.97% | -18.04% |
| -6 | 1.22% | 0.38% | 0.83% | -17.21% |
| -5 | 1.57% | 0.05% | 1.52% | -15.69% |
| -4 | 0.53% | 0.43% | 0.10% | -15.59% |
| -3 | 0.25% | 0.38% | -0.13% | -15.73% |
| -2 | 0.07% | 0.11% | -0.04% | -15.77% |
| -1 | 5.03% | 0.29% | 4.74% | -11.03% |
| 0 | 2.40% | 0.16% | 2.23% | -8.79% |
| 1 | -0.05% | -0.03% | -0.01% | -8.81% |
| 2 | -2.39% | -0.12% | -2.27% | -11.07% |
| 3 | 0.62% | 0.30% | 0.32% | -10.75% |
| 4 | 0.04% | 0.20% | -0.16% | -10.92% |
| 5 | 3.38% | 0.28% | 3.10% | -7.81% |
| 6 | 0.25% | -0.04% | 0.29% | -7.52% |
| 7 | -0.08% | 0.32% | -0.40% | -7.92% |
| 8 | -1.47% | 0.15% | -1.62% | -9.54% |
| 9 | -1.55% | -0.01% | -1.54% | -11.08% |
| 10 | 1.64% | 0.17% | 1.47% | -9.61% |
| 11 | -1.62% | -0.32% | -1.30% | -10.90% |
| 12 | -1.40% | 0.00% | -1.39% | -12.30% |
| 13 | -0.01% | -0.09% | 0.08% | -12.22% |
| 14 | -0.25% | 0.14% | -0.38% | -12.61% |
| 15 | -0.25% | 0.18% | -0.43% | -13.04% |
| 16 | -0.18% | -0.10% | -0.08% | -13.12% |
| 17 | 0.91% | 0.43% | 0.48% | -12.64% |
| 18 | -0.52% | 0.04% | -0.56% | -13.20% |
| 19 | -0.86% | -0.02% | -0.84% | -14.04% |
| 20 | -0.20% | 0.45% | -0.65% | -14.69% |

Source of data: www.moneycontrol.com

The Abnormal Return for Event Day was (2.23%) whereas the Cumulative AR was (-14.69%) for the Event Window (-20,20)

| Table 5.24 Group-2 Case-C | | | | |
|---|---|---|---|---|
| Event Days | Re | Er | Ar | CAR |
| -20 | -0.15% | -0.22% | 0.07% | 0.07% |
| -19 | -2.47% | -0.19% | -2.27% | -2.20% |
| -18 | -0.48% | -0.60% | 0.12% | -2.08% |
| -17 | 2.43% | 0.07% | 2.36% | 0.28% |
| -16 | -6.06% | 0.46% | -6.51% | -6.23% |
| -15 | -6.53% | -1.07% | -5.46% | -11.69% |
| -14 | 0.37% | -0.63% | 1.00% | -10.69% |
| -13 | 3.45% | -0.66% | 4.12% | -6.58% |
| -12 | -2.82% | 0.51% | -3.33% | -9.91% |
| -11 | -3.42% | -0.37% | -3.06% | -12.97% |
| -10 | 1.22% | 0.14% | 1.08% | -11.89% |
| -9 | -0.38% | 0.21% | -0.59% | -12.47% |
| -8 | -0.71% | 0.00% | -0.71% | -13.18% |
| -7 | -1.92% | -0.04% | -1.88% | -15.07% |
| -6 | -1.88% | -0.57% | -1.31% | -16.38% |
| -5 | 5.81% | -0.50% | 6.31% | -10.07% |
| -4 | -3.78% | 0.59% | -4.38% | -14.44% |
| -3 | -5.49% | -0.36% | -5.12% | -19.57% |
| -2 | -5.97% | -0.40% | -5.57% | -25.14% |
| -1 | -6.32% | -0.32% | -6.00% | -31.15% |
| 0 | 6.58% | -0.75% | 7.33% | -23.82% |
| 1 | -1.15% | 0.87% | -2.03% | -25.85% |
| 2 | -1.12% | -0.54% | -0.58% | -26.43% |
| 3 | -2.48% | -0.69% | -1.79% | -28.22% |
| 4 | 4.27% | -0.23% | 4.51% | -23.71% |
| 5 | 1.92% | 1.09% | 0.83% | -22.88% |
| 6 | 0.23% | 0.56% | -0.33% | -23.21% |
| 7 | 0.84% | 0.18% | 0.66% | -22.55% |
| 8 | 0.47% | -0.28% | 0.75% | -21.81% |
| 9 | -1.20% | 0.35% | -1.55% | -23.35% |
| 10 | 4.13% | 0.37% | 3.76% | -19.59% |
| 11 | 1.39% | 0.19% | 1.20% | -18.40% |
| 12 | -5.13% | 0.02% | -5.14% | -23.54% |
| 13 | -2.80% | -0.57% | -2.24% | -25.78% |
| 14 | -2.52% | 0.17% | -2.69% | -28.47% |
| 15 | 2.35% | -0.04% | 2.38% | -26.09% |
| 16 | -0.97% | 0.05% | -1.02% | -27.11% |
| 17 | 0.28% | 0.69% | -0.41% | -27.52% |
| 18 | -2.22% | 0.13% | -2.35% | -29.87% |
| 19 | 2.28% | -0.05% | 2.33% | -27.54% |
| 20 | -0.88% | 0.38% | -1.26% | -28.81% |

Source of data: www.moneycontrol.com

The Abnormal Return for Event Day was (7.33%) whereas the Cumulative AR was (-28.81%) for the Event Window (-20,20)

| Table 5.25 Group-2 Case-E | | | | |
|---|---|---|---|---|
| Event Days | Re | Er | Ar | CAR |
| -20 | 1.57% | -0.31% | 1.87% | 1.87% |
| -19 | -3.73% | 0.99% | -4.72% | -2.85% |
| -18 | 2.46% | 3.37% | -0.92% | -3.76% |
| -17 | -1.92% | 0.30% | -2.22% | -5.98% |
| -16 | 0.46% | 1.19% | -0.73% | -6.71% |
| -15 | -0.16% | 1.48% | -1.64% | -8.36% |
| -14 | -1.37% | 0.42% | -1.80% | -10.16% |
| -13 | 0.66% | 0.28% | 0.38% | -9.78% |
| -12 | 6.75% | 1.22% | 5.53% | -4.25% |
| -11 | -0.08% | 0.81% | -0.88% | -5.14% |
| -10 | 2.01% | 0.35% | 1.66% | -3.47% |
| -9 | -6.95% | 2.47% | -9.42% | -12.89% |
| -8 | -3.14% | -0.12% | -3.02% | -15.91% |
| -7 | 0.65% | 0.16% | 0.49% | -15.42% |
| -6 | 0.82% | -1.03% | 1.86% | -13.56% |
| -5 | 0.41% | 3.63% | -3.22% | -16.79% |
| -4 | -8.23% | 1.76% | -9.99% | -26.78% |
| -3 | -1.58% | 0.82% | -2.40% | -29.18% |
| -2 | 8.06% | -1.43% | 9.49% | -19.70% |
| -1 | 1.49% | 2.84% | -1.35% | -21.04% |
| 0 | 9.97% | 0.15% | 9.82% | -11.23% |
| 1 | 0.09% | -1.17% | 1.26% | -9.97% |
| 2 | -5.18% | -2.75% | -2.43% | -12.40% |
| 3 | -3.13% | -1.68% | -1.44% | -13.85% |
| 4 | -0.41% | 0.42% | -0.82% | -14.67% |
| 5 | 3.47% | 4.00% | -0.53% | -15.20% |
| 6 | 1.90% | 0.26% | 1.63% | -13.56% |
| 7 | -2.17% | 1.25% | -3.42% | -16.98% |
| 8 | -0.53% | 2.11% | -2.63% | -19.61% |
| 9 | -0.80% | 3.10% | -3.90% | -23.51% |
| 10 | 1.30% | -0.56% | 1.86% | -21.65% |
| 11 | -1.06% | 0.39% | -1.45% | -23.10% |
| 12 | -4.07% | -0.26% | -3.81% | -26.91% |
| 13 | -0.75% | 1.16% | -1.91% | -28.82% |
| 14 | -3.52% | -1.30% | -2.22% | -31.05% |
| 15 | -1.76% | -0.56% | -1.20% | -32.24% |
| 16 | -2.53% | -0.26% | -2.27% | -34.51% |
| 17 | 0.11% | -0.74% | 0.84% | -33.67% |
| 18 | 2.29% | -0.43% | 2.72% | -30.96% |
| 19 | 4.22% | -0.51% | 4.73% | -26.22% |
| 20 | -4.58% | 1.40% | -5.98% | -32.20% |

Source of data: www.moneycontrol.com

The Abnormal Return for Event Day was (9.82%) whereas the Cumulative AR was (-32.20%) for the Event Window (-20,20)

| Table 5.26 Group3 Case A | | | | |
|---|---|---|---|---|
| Event Days | Re | Er | Ar | CAR |
| -20 | -0.71% | -0.31% | -0.40% | -0.40% |
| -19 | 15.76% | -0.82% | 16.58% | 16.19% |
| -18 | 7.34% | 0.03% | 7.31% | 23.50% |
| -17 | -4.04% | -0.02% | -4.02% | 19.48% |
| -16 | 6.87% | -0.35% | 7.21% | 26.69% |
| -15 | 6.27% | 0.47% | 5.79% | 32.48% |
| -14 | -2.19% | -0.06% | -2.13% | 30.35% |
| -13 | -6.72% | -0.17% | -6.55% | 23.80% |
| -12 | 5.22% | -0.14% | 5.36% | 29.15% |
| -11 | -4.09% | 0.31% | -4.40% | 24.75% |
| -10 | 1.89% | -0.40% | 2.29% | 27.04% |
| -9 | 3.22% | 0.06% | 3.16% | 30.21% |
| -8 | 1.09% | -0.23% | 1.33% | 31.53% |
| -7 | 1.93% | 0.00% | 1.93% | 33.46% |
| -6 | 0.83% | -0.16% | 0.99% | 34.46% |
| -5 | 1.28% | -0.34% | 1.62% | 36.07% |
| -4 | -0.30% | -0.14% | -0.16% | 35.92% |
| -3 | 7.44% | -0.25% | 7.69% | 43.61% |
| -2 | -4.22% | -0.27% | -3.96% | 39.65% |
| -1 | 6.22% | -0.11% | 6.32% | 45.98% |
| 0 | -0.41% | -0.01% | -0.40% | 45.58% |
| 1 | -0.21% | -0.09% | -0.12% | 45.46% |
| 2 | -0.27% | -0.37% | 0.10% | 45.56% |
| 3 | -0.34% | 0.01% | -0.35% | 45.21% |
| 4 | 0.62% | -0.33% | 0.95% | 46.16% |
| 5 | 2.26% | -0.01% | 2.27% | 48.43% |
| 6 | -1.94% | -0.30% | -1.65% | 46.78% |
| 7 | -0.27% | 0.00% | -0.28% | 46.51% |
| 8 | 0.27% | 0.01% | 0.26% | 46.77% |
| 9 | 0.00% | -0.05% | 0.05% | 46.82% |
| 10 | 0.61% | 0.11% | 0.50% | 47.32% |
| 11 | -0.14% | 0.17% | -0.31% | 47.01% |
| 12 | -1.09% | -0.16% | -0.92% | 46.09% |
| 13 | -0.14% | 0.01% | -0.14% | 45.95% |
| 14 | 0.41% | -0.24% | 0.65% | 46.60% |
| 15 | 0.07% | -0.34% | 0.41% | 47.01% |
| 16 | -0.07% | -0.13% | 0.06% | 47.07% |
| 17 | -0.14% | 0.07% | -0.21% | 46.86% |
| 18 | 0.21% | -0.08% | 0.29% | 47.15% |
| 19 | 0.00% | 0.17% | -0.17% | 46.98% |
| 20 | 0.27% | 0.11% | 0.16% | 47.14% |

Source of data: www.moneycontrol.com

The Abnormal Return for Event Day was (-0.40%) whereas the Cumulative AR was (47.14%) for the Event Window (-20,20)

| Table 5.27 Group3 CaseB | | | | |
|---|---|---|---|---|
| Event Days | Re | Er | Ar | CAR |
| -20 | -1.85% | 0.09% | -1.94% | -1.94% |
| -19 | 1.56% | 0.19% | 1.37% | -0.57% |
| -18 | 0.84% | 0.15% | 0.69% | 0.13% |
| -17 | 0.83% | 0.25% | 0.59% | 0.71% |
| -16 | -1.55% | 0.18% | -1.73% | -1.02% |
| -15 | 0.68% | 0.09% | 0.59% | -0.43% |
| -14 | 2.17% | 0.10% | 2.07% | 1.64% |
| -13 | 0.81% | 0.31% | 0.50% | 2.14% |
| -12 | 1.90% | 0.25% | 1.65% | 3.79% |
| -11 | 3.39% | 0.18% | 3.21% | 7.01% |
| -10 | -2.57% | 0.24% | -2.81% | 4.20% |
| -9 | -0.60% | 0.25% | -0.85% | 3.35% |
| -8 | -1.58% | 0.16% | -1.75% | 1.60% |
| -7 | 2.68% | 0.13% | 2.54% | 4.15% |
| -6 | -1.49% | 0.18% | -1.67% | 2.48% |
| -5 | 1.00% | 0.13% | 0.87% | 3.34% |
| -4 | 0.46% | 0.06% | 0.39% | 3.74% |
| -3 | 1.84% | 0.24% | 1.60% | 5.34% |
| -2 | -0.77% | 0.17% | -0.94% | 4.40% |
| -1 | 0.14% | 0.18% | -0.03% | 4.36% |
| 0 | -1.62% | 0.21% | -1.83% | 2.53% |
| 1 | 0.71% | 0.15% | 0.56% | 3.09% |
| 2 | -0.60% | 0.12% | -0.72% | 2.37% |
| 3 | 1.02% | 0.20% | 0.82% | 3.20% |
| 4 | -0.29% | 0.25% | -0.53% | 2.66% |
| 5 | -0.05% | 0.13% | -0.19% | 2.47% |
| 6 | -0.35% | 0.16% | -0.51% | 1.97% |
| 7 | -0.38% | 0.08% | -0.46% | 1.50% |
| 8 | 0.20% | 0.19% | 0.01% | 1.51% |
| 9 | -2.28% | -0.14% | -2.14% | -0.63% |
| 10 | 0.88% | 0.23% | 0.65% | 0.02% |
| 11 | 0.24% | 0.32% | -0.08% | -0.06% |
| 12 | 0.26% | 0.20% | 0.06% | 0.00% |
| 13 | -0.09% | 0.17% | -0.26% | -0.26% |
| 14 | -0.39% | 0.19% | -0.57% | -0.83% |
| 15 | 0.00% | 0.06% | -0.06% | -0.90% |
| 16 | -0.15% | 0.25% | -0.39% | -1.29% |
| 17 | 0.02% | 0.26% | -0.25% | -1.54% |
| 18 | -0.22% | 0.11% | -0.34% | -1.87% |
| 19 | -0.46% | 0.09% | -0.56% | -2.43% |
| 20 | -1.12% | 0.25% | -1.37% | -3.80% |

Source of data: www.moneycontrol.com

The Abnormal Return for Event Day was (-1.83%) whereas the Cumulative AR was (-3.80%) for the Event Window (-20,20)

| Table 5.28 Group3 CaseC | | | | |
|---|---|---|---|---|
| Event Days | Re | Er | Ar | CAR |
| -20 | 2.09% | 0.89% | 1.20% | 1.20% |
| -19 | -0.16% | 1.43% | -1.59% | -0.39% |
| -18 | 3.29% | 0.34% | 2.94% | 2.56% |
| -17 | 0.04% | -0.68% | 0.72% | 3.28% |
| -16 | -1.35% | 0.10% | -1.45% | 1.83% |
| -15 | -1.14% | -1.17% | 0.03% | 1.86% |
| -14 | -0.35% | -0.90% | 0.55% | 2.41% |
| -13 | -1.18% | -1.08% | -0.10% | 2.31% |
| -12 | 0.59% | -0.23% | 0.82% | 3.13% |
| -11 | 0.46% | 1.01% | -0.55% | 2.58% |
| -10 | 1.77% | -0.74% | 2.52% | 5.09% |
| -9 | 4.77% | 0.43% | 4.34% | 9.43% |
| -8 | -2.76% | -1.29% | -1.47% | 7.96% |
| -7 | 3.09% | -0.34% | 3.43% | 11.39% |
| -6 | -2.09% | -1.70% | -0.38% | 11.01% |
| -5 | 1.18% | 1.07% | 0.10% | 11.11% |
| -4 | -3.47% | -0.73% | -2.73% | 8.38% |
| -3 | 3.87% | -1.98% | 5.85% | 14.22% |
| -2 | 6.53% | -0.68% | 7.21% | 21.43% |
| -1 | 0.01% | 1.29% | -1.28% | 20.15% |
| 0 | -3.08% | 0.32% | -3.40% | 16.75% |
| 1 | 4.31% | -0.20% | 4.50% | 21.25% |
| 2 | 0.15% | 0.90% | -0.75% | 20.51% |
| 3 | 2.41% | 1.27% | 1.14% | 21.65% |
| 4 | 2.88% | -1.04% | 3.92% | 25.57% |
| 5 | -7.68% | -1.30% | -6.38% | 19.20% |
| 6 | -1.74% | -2.09% | 0.35% | 19.55% |
| 7 | -5.38% | -1.14% | -4.24% | 15.31% |
| 8 | 2.31% | -0.77% | 3.07% | 18.38% |
| 9 | 3.83% | 0.55% | 3.27% | 21.65% |
| 10 | -2.03% | 0.93% | -2.96% | 18.69% |
| 11 | -2.11% | -2.63% | 0.52% | 19.21% |
| 12 | 0.00% | -1.49% | 1.49% | 20.70% |
| 13 | -3.13% | -2.27% | -0.86% | 19.84% |
| 14 | 2.90% | 3.43% | -0.53% | 19.31% |
| 15 | -1.42% | -2.56% | 1.14% | 20.45% |
| 16 | 4.75% | 1.76% | 2.98% | 23.43% |
| 17 | -0.65% | 0.38% | -1.03% | 22.40% |
| 18 | -1.86% | -0.76% | -1.10% | 21.30% |
| 19 | 2.30% | 2.92% | -0.63% | 20.68% |
| 20 | 0.24% | -0.12% | 0.36% | 21.04% |

Source of data: www.moneycontrol.com

The Abnormal Return for Event Day was (-3.40%) whereas the Cumulative AR was (21.04%) for the Event Window (-20,20)

| Table 5.29 Group3CaseD | | | | |
|---|---|---|---|---|
| Event Days | Re | Er | Ar | CAR |
| -20 | 2.63% | 0.19% | 2.44% | 2.44% |
| -19 | 2.27% | 0.24% | 2.03% | 4.47% |
| -18 | 0.99% | 0.36% | 0.63% | 5.10% |
| -17 | 2.25% | 0.29% | 1.96% | 7.05% |
| -16 | -0.28% | 0.54% | -0.82% | 6.23% |
| -15 | 7.36% | 0.47% | 6.89% | 13.12% |
| -14 | -3.30% | 0.15% | -3.45% | 9.67% |
| -13 | -0.25% | 0.17% | -0.41% | 9.26% |
| -12 | 5.33% | 0.35% | 4.98% | 14.24% |
| -11 | 4.98% | 0.32% | 4.66% | 18.89% |
| -10 | -1.19% | 0.38% | -1.57% | 17.32% |
| -9 | 2.35% | 0.41% | 1.95% | 19.27% |
| -8 | 1.88% | 0.19% | 1.70% | 20.96% |
| -7 | 0.67% | 0.40% | 0.28% | 21.24% |
| -6 | 4.07% | 0.30% | 3.78% | 25.02% |
| -5 | -0.96% | 0.38% | -1.34% | 23.68% |
| -4 | -1.48% | 0.35% | -1.83% | 21.85% |
| -3 | -2.06% | 0.47% | -2.53% | 19.32% |
| -2 | 2.56% | 0.31% | 2.25% | 21.57% |
| -1 | 3.11% | 0.35% | 2.76% | 24.33% |
| 0 | -10.35% | 0.44% | -10.79% | 13.54% |
| 1 | -0.81% | 0.41% | -1.22% | 12.32% |
| 2 | -1.32% | 0.28% | -1.60% | 10.72% |
| 3 | -5.45% | 0.00% | -5.45% | 5.27% |
| 4 | 3.74% | 0.26% | 3.48% | 8.76% |
| 5 | 0.71% | 0.31% | 0.40% | 9.16% |
| 6 | 0.47% | 0.37% | 0.10% | 9.26% |
| 7 | -0.70% | 0.26% | -0.96% | 8.29% |
| 8 | -1.26% | 0.28% | -1.54% | 6.76% |
| 9 | -2.33% | 0.26% | -2.59% | 4.16% |
| 10 | 1.01% | 0.33% | 0.68% | 4.84% |
| 11 | 0.38% | 0.38% | -0.01% | 4.84% |
| 12 | 1.77% | 0.38% | 1.39% | 6.23% |
| 13 | -1.87% | 0.34% | -2.21% | 4.01% |
| 14 | 1.56% | 0.40% | 1.16% | 5.17% |
| 15 | 3.73% | 0.28% | 3.44% | 8.62% |
| 16 | -0.53% | 0.29% | -0.82% | 7.79% |
| 17 | -0.95% | 0.35% | -1.30% | 6.49% |
| 18 | 0.96% | 0.28% | 0.67% | 7.17% |
| 19 | -1.66% | 0.42% | -2.09% | 5.08% |
| 20 | -0.70% | 0.34% | -1.04% | 4.03% |

Source of data: www.moneycontrol.com

The Abnormal Return for Event Day was (-10.79%) whereas the Cumulative AR was (4.03%) for the Event Window (-20,20)

The AR & CAR values of given cases have mixed result. In order to check the statistical significance of these values. as discussed in previous chapter, the Patell (1976) test for Event study has been used.

Event study is conducted and the significance of Cumulative Standardized Abnormal is analyzed for different Event Windows at 1%, 5% and 10% level for each case except two cases first. Group1 CaseA, second Group2 Case D due to unavailability of data.

**Table 5.30 Group-1 Case-B:**

| Event Windows | CSAR | Z Value | Alpha 1% | Alpha 5% | Alpha 10% |
|---|---|---|---|---|---|
| (-10,10) | -5.151 | -1.124 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-10,2) | -1.72 | -0.477 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-5,5) | 0.475 | 0.143 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-2,2) | 2.367 | 1.058 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-1,1) | -1.068 | -0.617 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (+2,20) | -2.998 | -0.625 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

In this case we are failed to reject null hypothesis that there is no abnormal return in terms of value creation gained by the shareholders of Acquiring firms .There is no significant cumulative abnormal return is found in any event at all three significant value of alpha i.e 1%, 5% and 10%.

In this case also we are failed to reject null hypothesis that there is no abnormal return in terms of value creation gained by the shareholders of Acquiring firms .There is no significant cumulative abnormal return is found in any event at all three significant value of alpha i.e 1%, 5% and 10%.

**Table 5.31 Group1CaseC**

| Event Windows | CSAR | Z Value | Alpha 1% | Alpha 5% | Alpha 10% |
|---|---|---|---|---|---|
| (-10,10) | -11.702 | -2.554 | $H_0$ Accepted | $H_0$ rejected | $H_0$ rejected |
| (-10,2) | -9.244 | -2.564 | $H_0$ Accepted | $H_0$ rejected | $H_0$ rejected |
| (-5,5) | -4.704 | -1.418 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-2,2) | -2.912 | -1.302 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-1,1) | -0.845 | -0.488 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (+2,20) | -0.772 | -0.161 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

In this case we are failed to reject null hypothesis that there is no abnormal return in terms of value creation gained by the shareholders of Acquiring firms .There is no significant cumulative abnormal return is found in any event except event windows (-10,10) and ( -10,2). In these two event windows the significant cumulative abnormal returns were gained.

| Table 5.32 Group1CaseD | | | | | |
|---|---|---|---|---|---|
| Event Windows | CSAR | Z Value | Alpha 1% | Alpha 5% | Alpha 10% |
| (-10,10) | 0.811 | 0.177 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |
| (-10,2) | -2.439 | -0.677 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |
| (-5,5) | -2.641 | -0.796 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |
| (-2,2) | -4.707 | -2.105 | $H_o$ Accepted | $H_o$ rejected | $H_o$ rejected |
| (-1,1) | -0.059 | -0.034 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |
| (+2,20) | | -0.779 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

In this case also the result was almost same as we found in previous case with a difference that here the cumulative abnormal return is statistically significant in event windows ( -2,2) at 5% level except this there is no significant gain is found in any event windows .

| Table 5.33 Group2CaseA | | | | | |
|---|---|---|---|---|---|
| Event Windows | CSAR | Z Value | Alpha 1% | Alpha 5% | Alpha 10% |
| (-10,10) | 4.999 | 1.091 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |
| (-10,2) | 7.37 | 2.044 | $H_o$ Accepted | $H_o$ rejected | $H_o$ rejected |
| (-5,5) | 5.218 | 1.573 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |
| (-2,2) | 8.616 | 3.853 | $H_o$ rejected | $H_o$ rejected | $H_o$ rejected |
| (-1,1) | 9.851 | 5.687 | $H_o$ rejected | $H_o$ rejected | $H_o$ rejected |
| (+2,20) | -3.346 | -0.698 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

There is a statistically significant abnormal return is gain around the announcement date .We are failed to reject null hypothesis even at 1% level in the event windows (-1,1) and (-2,2).

| Table 5.34 Group2CaseB | | | | | |
|---|---|---|---|---|---|
| Event Windows | CSAR | Z Value | Alpha 1% | Alpha 5% | Alpha 10% |
| (-10,10) | 2.532 | 0.553 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-10,2) | 1.728 | 0.479 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-5,5) | 5.152 | 1.553 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-2,2) | 2.551 | 1.141 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-1,1) | 3.819 | 2.205 | $H_0$ Accepted | $H_0$ rejected | $H_0$ rejected |
| (+2,20) | -3.224 | -0.672 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

There is a statistically significant abnormal return is gain around the announcement date .We are failed to accept null hypothesis even at 1% level in the event windows (-1,1) .

| Table 5.35 Group2CaseC | | | | | |
|---|---|---|---|---|---|
| Event Windows | CSAR | Z Value | Alpha 1% | Alpha 5% | Alpha 10% |
| (-10,10) | -2.713 | -0.592 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-10,2) | -5.483 | -1.521 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-5,5) | -2.667 | -0.804 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-2,2) | -2.82 | -1.261 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-1,1) | -0.34 | -0.196 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (+2,20) | -1.187 | -0.248 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

In this case we are failed to reject null hypothesis that there is no abnormal return in terms of value creation gained by the shareholders of Acquiring firms .There is no significant cumulative abnormal return is found in any event windows.

| Table 5.36 Group2CaseE | | | | | |
|---|---|---|---|---|---|
| Event Windows | CSAR | Z Value | Alpha 1% | Alpha 5% | Alpha 10% |
| (-10,10) | -4.555 | -0.994 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-10,2) | -1.989 | -0.552 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-5,5) | -0.423 | -0.127 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-2,2) | 4.705 | 2.104 | $H_0$ Accepted | $H_0$ rejected | $H_0$ rejected |
| (-1,1) | 2.73 | 1.576 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (+2,20) | -6.187 | -1.29 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

The cumulative abnormal return is created in the event window (-2,2) except this the null hypothesis is rejected in all other event windows .

| Table 5.37 Group2: Case-F | | | | | |
|---|---|---|---|---|---|
| Event Windows | CSAR | Z Value | Alpha 1% | Alpha 5% | Alpha 10% |
| (-10,10) | 2.71 | 0.591 | HoAccepted | HoAccepted | HoAccepted |
| (-10,2) | 6.48 | 1.797 | HoAccepted | HoAccepted | Ho rejected |
| (-5,5) | -3.789 | -1.142 | HoAccepted | HoAccepted | HoAccepted |
| (-2,2) | -2.192 | -0.98 | HoAccepted | HoAccepted | HoAccepted |
| (-1,1) | -0.952 | -0.55 | HoAccepted | HoAccepted | HoAccepted |
| (+2,20) | -6.689 | -1.395 | HoAccepted | HoAccepted | HoAccepted |

Source of Data: www.moneycontrol.com, BSESENSEX

In this also there is no statistically significant abnormal return found in all event windows except in (-10,2) at 10% level.

| Table 5.38 Group3: Case-A | | | | | |
|---|---|---|---|---|---|
| Event Windows | CSAR | Z Value | Alpha 1% | Alpha 5% | Alpha 10% |
| (-10,10) | 6.811 | 1.486 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-10,2) | 6.278 | 1.741 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ rejected |
| (-5,5) | 4.218 | 1.272 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-2,2) | 0.59 | 0.264 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-1,1) | 1.755 | 1.013 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (+2,20) | 0.507 | 0.106 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

In this also there is no statistically significant abnormal return found in all event windows except in (-10,2) at 10% level.

| Table 5.39 Group3:Case-B | | | | | |
|---|---|---|---|---|---|
| Event Windows | CSAR | Z Value | Alpha 1% | Alpha 5% | Alpha 10% |
| (-10,10) | -2.162 | -0.472 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-10,2) | -1.438 | -0.399 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-5,5) | -0.001 | 0 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-2,2) | -0.92 | -0.411 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (-1,1) | -0.404 | -0.233 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |
| (+2,20) | -2.134 | -0.445 | $H_0$ Accepted | $H_0$ Accepted | $H_0$ Accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

| Table 5.40 Group3:Case-C | | | | | |
|---|---|---|---|---|---|
| Event Windows | CSAR | Z Value | Alpha 1% | Alpha 5% | Alpha 10% |
| (-10,10) | 8.469 | 1.848 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ rejected |
| (-10,2) | 9.416 | 2.611 | $H_o$ rejected | $H_o$ rejected | $H_o$ rejected |
| (-5,5) | 4.292 | 1.294 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |
| (-2,2) | 3.305 | 1.478 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |
| (-1,1) | -0.093 | -0.054 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |
| (+2,20) | -0.112 | -0.023 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

In this also there is no statistically significant abnormal return found in all event windows except in (-10, 10) at 10% level.

| Table 5.41 Group3:Case-D | | | | | |
|---|---|---|---|---|---|
| Event Windows | CSAR | Z Value | Alpha 1% | Alpha 5% | Alpha 10% |
| (-10,10) | -3.098 | -0.676 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |
| (-10,2) | -1.803 | -0.5 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |
| (-5,5) | -3.498 | -1.055 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |
| (-2,2) | -1.898 | -0.849 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |
| (-1,1) | -2.042 | -1.179 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |
| (+2,20) | -1.828 | -0.381 | $H_o$ Accepted | $H_o$ Accepted | $H_o$ Accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

In this case we are failed to reject null hypothesis that there is no abnormal return in terms of value creation gained by the shareholders of Acquiring firms .There is no significant cumulative abnormal return is found in any event windows.

**Section D-Accounting Performance Analysis**

The long term performance of the companies after M&A has been evaluated on the basis of Accounting Ratios, keeping in view that synergy value created in all M&A in pharmaceutical companies investigated in this study. Therefore, in order to analyze the impact of M&A on financial performance in terms of accounting ratios 'Paired t-test' methodology has been adopted to analyze the significant difference between the pre and post M&A accounting performance. The ratios identified in previous chapter have been used, listed as-

Table 5.41

| Accounting Ratio | Code |
|---|---|
| Operating Profit Margin | $A_1$ |
| Gross Profit Margin | $A_2$ |
| Net Profit Margin | $A_3$ |
| Return On Networth | $A_4$ |
| Curren Ratio | $A_5$ |
| Debt Equity Ratio | $A_6$ |
| Inventory Turnover Ratio | $A_7$ |
| Number of Days in working Capital | $A_8$ |
| Selling & Distribution Cost Composition | $A_9$ |
| Dividend Payout Ratio Net Profit | $A_{10}$ |

To analyze the significant difference between pre-M&A accounting performance to the post M&A performance across all Indian companies investigated, whether they are acquirer or target . The null hypothesis have been formulated as-

$H_{0ijk}$ : There is no significant improvement in the accounting ratios after M&A

$I=A_1$, $A_2$ ..........................................$A_{10}$

J= Group 1 ,Group2 and Group3.

K=Case- A, Case-B, Case-C , Case-D, Case-E and Case-F

The significance of the difference between the pre and post M&A Accounting performance has investigated on the value of 'P' and if the calculated value of P < .05 the null Hypothesis is accepted otherwise rejected.

| Table 5.42 Group1 Case-A: Arch Pharma Pre and Post M&A Accounting Ratios | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pre- M&A | | | | | Post- M&A | | | | | | |
| Ratios | years | | | Mean | Std | years | | | Mean | Std | P-value | $H_0$ |
| | Mar '04 | Mar '05 | Mar '06 | | | Mar '07 | Mar '08 | Mar '09 | | | | |
| $A_1$ | 18.61 | 18.41 | 18.96 | 18.66 | 0.28 | 19.17 | 18.56 | 19.31 | 19.01 | 0.4 | 0.10 | accepted |
| $A_2$ | 18.11 | 18.01 | 18.98 | 18.37 | 0.53 | 15.88 | 15.44 | 15.94 | 15.75 | 0.27 | 0.01 | rejected |
| $A_3$ | 9.22 | 6.55 | 6.43 | 7.4 | 1.58 | 6.52 | 6.46 | 5.13 | 6.04 | 0.79 | 0.21 | accepted |
| $A_4$ | 26.06 | 15.37 | 14.35 | 18.59 | 6.49 | 12.55 | 11.23 | 9.24 | 11.01 | 1.67 | 0.13 | accepted |
| $A_5$ | 1.08 | 0.91 | 17.15 | 6.38 | 9.33 | 13.54 | 9.47 | 9.53 | 10.85 | 2.33 | 0.54 | accepted |
| $A_6$ | 1.58 | 1.72 | 0.81 | 1.37 | 0.49 | 1.12 | 1.31 | 0.92 | 1.12 | 0.2 | 0.30 | accepted |
| $A_7$ | 3.93 | 3.01 | 2.26 | 3.07 | 0.84 | 1.73 | 1.1 | 2.2 | 1.68 | 0.55 | 0.17 | accepted |
| $A_8$ | 134.27 | 165.94 | 3.44 | 101.22 | 86.14 | 3.07 | 3.49 | 2.37 | 2.98 | 0.57 | 0.19 | accepted |
| $A_9$ | 3.58 | 1.77 | 1.35 | 2.23 | 1.19 | 1.23 | 1.51 | 1.06 | 1.27 | 0.23 | 0.30 | accepted |
| $A_{10}$ | 0.04 | 1.26 | 0.24 | 0.51 | 0.65 | 0.55 | 0.24 | 1.06 | 0.62 | 0.41 | 0.87 | accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

Except gross profit margin all other ratios investigated in the above case shows that there is no significant between the Pre and Post accounting ratios

| Table 5.43 Group1CaseB:Aurbindo Pharma Pre and post M&A accounting performance | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ratios | Pre- M&A | | | | | Post- M&A | | | | | | |
| | years | | | Mean | Std | years | | | Mean | Std | P-value | $H_0$ |
| | Mar '06 | Mar '07 | Mar '08 | | | Mar '10 | Mar '11 | Mar '12 | | | | |
| $A_1$ | 11.32 | 14.31 | 14.07 | 13.23 | 1.66 | 23.09 | 21.92 | 12.92 | 19.31 | 5.56 | 0.25 | accepted |
| $A_2$ | 6.75 | 9.59 | 9.93 | 8.76 | 1.75 | 18.95 | 18.01 | 8.59 | 15.18 | 5.73 | 0.25 | accepted |
| $A_3$ | 4.34 | 9.42 | 9.75 | 7.84 | 3.03 | 15.55 | 12.80 | (2.67) | 8.56 | 9.82 | 0.93 | accepted |
| $A_4$ | 8.55 | 22.68 | 21.21 | 17.48 | 7.77 | 30.80 | 23.04 | (5.27) | 16.19 | 18.99 | 0.94 | accepted |
| $A_5$ | 1.05 | 1.25 | 1.14 | 1.15 | 0.10 | 0.89 | 1.16 | 2.55 | 1.53 | 0.89 | 0.53 | accepted |
| $A_6$ | 1.69 | 2.35 | 1.64 | 1.89 | 0.40 | 1.18 | 0.99 | 1.10 | 1.09 | 0.10 | 0.10 | accepted |
| $A_7$ | 3.95 | 3.71 | 3.47 | 3.71 | 0.24 | 3.64 | 3.37 | 3.06 | 3.36 | 0.29 | 0.01 | rejected |
| $A_8$ | 217.65 | 272.15 | 207.57 | 232.46 | 34.74 | 170.47 | 196.02 | 158.92 | 175.14 | 18.99 | 0.03 | rejected |
| $A_9$ | 3.01 | 3.12 | 3.64 | 3.26 | 0.34 | 3.98 | 3.33 | | 3.66 | 0.46 | 0.36 | accepted |
| $A_{10}$ | 13.31 | 7.76 | 8.61 | 9.89 | 2.99 | 5.75 | 12.13 | -- | 8.94 | 4.51 | 0.83 | accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

In the above case M&A has an impact on inventory turnover ratio and number of days in working capital.

| Table 5.44Group1: Case-C:Emami acquisition of Zandu Pre and Post M&A Accounting Ratios | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ratios | Pre- M&A | | | | | Post- M&A | | | | | | |
| | years | | | Mean | Std | years | | | Mean | Std | P-value | $H_0$ |
| | 2005 | 2006 | 2007 | | | 2009 | 2010 | 2011 | | | | |
| $A_1$ | 15.74 | 17.43 | 12.69 | 15.29 | 2.40 | 18.78 | 24.40 | 21.10 | 21.43 | 2.82 | 0.06 | accepted |
| $A_2$ | 14.38 | 15.21 | 11.78 | 13.79 | 1.79 | 16.31 | 12.60 | 11.45 | 13.45 | 2.54 | 0.82 | accepted |
| $A_3$ | 13.20 | 16.06 | 12.37 | 13.88 | 1.94 | 11.85 | 16.10 | 18.45 | 15.47 | 3.35 | 0.56 | accepted |
| $A_4$ | 2.55 | 1.86 | 1.83 | 2.08 | 0.41 | 29.63 | 26.60 | 33.33 | 29.85 | 3.37 | 0.01 | rejected |
| $A_5$ | 0.43 | 0.32 | 0.16 | 0.30 | 0.14 | 0.72 | 1.33 | 1.50 | 1.18 | 0.41 | 0.10 | accepted |
| $A_6$ | 37.47 | 51.28 | 28.90 | 39.22 | 11.29 | 1.49 | 0.41 | 0.33 | 0.74 | 0.65 | 0.03 | rejected |
| $A_7$ | 9.33 | 13.72 | 20.36 | 14.47 | 5.55 | 10.20 | 13.00 | 12.39 | 11.86 | 1.47 | 0.44 | accepted |
| $A_8$ | 128.00 | 91.61 | 73.57 | 97.73 | 27.73 | 23.40 | 89.00 | 123.00 | 78.47 | 50.63 | 0.71 | accepted |
| $A_9$ | 14.77 | 14.29 | 33.52 | 20.86 | 10.97 | 25.55 | 26.00 | 24.86 | 25.47 | 0.57 | 0.56 | accepted |
| $A_{10}$ | | | | | | | | | | | | |

Source of Data: www.moneycontrol.com, BSESENSEX

In the above case M&A has effect on Return on Net worth & Debt Equity Ratio

| Table 5.45Group1: Case-D Matrix Laboratories Pre and Post Accounting Ratios | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ratios | Pre- M&A | | | | | Post- M&A | | | | | | |
| | years | | | Mean | Std | years | | | Mean | Std | P-value | $H_0$ |
| | Mar '01 | Mar '02 | Mar '03 | | | Mar '05 | Mar '06 | Mar '07 | | | | |
| $A_1$ | 13.14 | 14.48 | 33.60 | 20.41 | 11.45 | 27.91 | 13.57 | 14.10 | 18.53 | 8.13 | 0.87 | accepted |
| $A_2$ | 10.79 | 12.85 | 27.17 | 16.94 | 8.92 | 27.87 | 24.89 | 12.69 | 21.82 | 8.04 | 0.67 | accepted |
| $A_3$ | 6.89 | 6.01 | 18.80 | 10.57 | 7.14 | 19.95 | 23.41 | 13.06 | 18.81 | 5.27 | 0.37 | accepted |
| $A_4$ | 34.11 | 26.08 | 73.90 | 44.70 | 25.61 | 20.88 | 20.98 | 10.18 | 17.35 | 6.21 | 0.27 | accepted |
| $A_5$ | 1.13 | 1.12 | 1.18 | 1.14 | 0.03 | 1.16 | 0.94 | 0.75 | 0.95 | 0.21 | 0.28 | accepted |
| $A_6$ | 1.20 | 0.88 | 1.32 | 1.13 | 0.23 | 0.07 | 0.18 | 0.23 | 0.16 | 0.08 | 0.02 | rejected |
| $A_7$ | 3.99 | 3.71 | 5.70 | 4.47 | 1.08 | 3.82 | 3.98 | 3.49 | 3.76 | 0.25 | 0.45 | accepted |
| $A_8$ | 78.47 | 43.69 | 70.36 | 64.17 | 18.20 | 77.92 | 142.35 | 112.23 | 110.83 | 32.24 | 0.25 | accepted |
| $A_9$ | 3.92 | 3.87 | 8.03 | 5.27 | 2.39 | 3.47 | 2.91 | 2.43 | 2.94 | 0.52 | 0.29 | accepted |
| $A_{10}$ | -- | 12.80 | 14.03 | | | 15.72 | 11.52 | -- | | | | |

Source of Data: www.moneycontrol.com, BSESENSEX

The M&A has an impact on Debt-Equity Ratio in this case also.

| Table 5.46Group2: Case-A:Dr Reddy Acquisition of Beta Pharma ( Feb,2006) | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ratios | Pre- M&A | | | | | Post- M&A | | | | | | |
| | years | | | Mean | Std | years | | | Mean | Std | P-value | $H_0$ |
| | Mar '03 | Mar '04 | Mar '05 | | | Mar '07 | Mar '08 | Mar '09 | | | | |
| $A_1$ | 30.03 | 20.87 | 10.53 | 20.48 | 9.76 | 35.08 | 17.42 | 18.95 | 23.82 | 9.78 | 0.44 | accepted |
| $A_2$ | 25.44 | 23.48 | 13.63 | 20.85 | 6.33 | 38.66 | 12.58 | 14.11 | 21.78 | 14.64 | 0.91 | accepted |
| $A_3$ | 32.05 | 16.47 | 4.06 | 17.53 | 14.02 | 29.01 | 13.57 | 13.20 | 18.59 | 9.02 | 0.82 | accepted |
| $A_4$ | 24.81 | 2.73 | 2.23 | 9.92 | 12.89 | 2.56 | 1.82 | 10.66 | 5.01 | 4.90 | 0.64 | accepted |
| $A_5$ | 21.70 | 0.03 | 0.13 | 7.29 | 12.48 | 0.08 | 0.10 | 1.85 | 0.68 | 1.02 | 0.47 | accepted |
| $A_6$ | 4.28 | 6.66 | 5.29 | 5.41 | 1.19 | 8.32 | 5.90 | 0.12 | 4.78 | 4.21 | 0.83 | accepted |
| $A_7$ | 0.02 | 201.50 | 317.56 | 173.03 | 160.67 | 263.93 | 211.04 | 6.09 | 160.35 | 136.19 | 0.95 | accepted |
| $A_8$ | 6.58 | 10.44 | 11.75 | 9.59 | 2.69 | 8.54 | 11.22 | 217.13 | 78.96 | 119.66 | 0.41 | accepted |
| $A_9$ | 270.31 | 59.31 | 59.38 | 129.67 | 121.80 | 81.74 | 70.77 | 11.21 | 54.57 | 37.95 | 0.33 | accepted |
| $A_{10}$ | 9.61 | 15.24 | 66.64 | 30.50 | 31.43 | 6.25 | 15.52 | 21.94 | 14.57 | 7.89 | 0.38 | accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

There is no Impact of M&A on all accounting ratios in this above case

| Table 5.47Group2: Case-B:Sun Pharma Pre and Post M&A Accounting Ratios | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ratios | Pre- M&A | | | | | Post- M&A | | | | | | |
| | years | | | | | years | | | | | | |
| | Mar '04 | Mar '05 | Mar '06 | Mean | Std | Mar '08 | Mar '09 | Mar '10 | Mean | Std | P-value | $H_0$ |
| $A_1$ | 40.11 | 35.51 | 30.01 | 35.21 | 5.06 | 46.17 | 43.56 | 30.00 | 39.91 | 8.68 | 0.19 | accepted |
| $A_2$ | 37.20 | 32.09 | 26.29 | 31.86 | 5.46 | 43.29 | 40.68 | 26.07 | 36.68 | 9.28 | 0.21 | accepted |
| $A_3$ | 31.58 | 32.19 | 32.31 | 32.03 | 0.39 | 42.49 | 40.69 | 31.64 | 38.27 | 5.81 | 0.22 | accepted |
| $A_4$ | 39.32 | 35.07 | 36.07 | 36.82 | 2.22 | 29.78 | 25.80 | 17.25 | 24.28 | 6.40 | 0.06 | accepted |
| $A_5$ | 2.42 | 4.52 | 4.15 | 3.70 | 1.12 | 4.58 | 4.30 | 3.55 | 4.14 | 0.53 | 0.66 | accepted |
| $A_6$ | 0.54 | 1.62 | 1.18 | 1.11 | 0.54 | 0.03 | 0.03 | 0.02 | 0.03 | 0.01 | 0.07 | accepted |
| $A_7$ | 4.20 | 4.24 | 3.59 | 4.01 | 0.36 | 4.76 | 4.79 | 4.00 | 4.52 | 0.45 | 0.01 | rejected |
| $A_8$ | 148.69 | 470.64 | 483.98 | 367.77 | 189.85 | 363.21 | 304.22 | 280.68 | 316.04 | 42.52 | 0.74 | accepted |
| $A_9$ | 3.93 | 6.41 | 8.27 | 6.20 | 2.18 | 7.46 | 7.43 | 7.99 | 7.63 | 0.32 | 0.33 | accepted |
| $A_{10}$ | 21.65 | 20.06 | 20.35 | 20.69 | 0.85 | 17.12 | 18.33 | 24.57 | 20.01 | 4.00 | 0.82 | accepted |

Source of Data: www.moneycontrol.com. BSESENSEX

The M&A has significant impact on Inventory turnover ratio in this above case.

| Table 5.48Group2: Case-C:Ranbaxy Pre and Post M&A Accounting Ratios | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ratios | Pre- M&A | | | | | Post- M&A | | | | | | |
| | years | | | Mean | Std | years | | | Mean | Std | P-value | $H_0$ |
| | 2004 | 2005 | 2006 | | | 2007 | 2008 | 2009 | | | | |
| $A_1$ | 17.93 | 5.23 | 14.30 | 12.49 | 6.54 | 11.15 | 8.33 | 9.55 | 9.68 | 1.41 | 0.45 | accepted |
| $A_2$ | 16.35 | 3.03 | 11.86 | 10.41 | 6.78 | 8.56 | 4.52 | 6.03 | 6.37 | 2.04 | 0.29 | accepted |
| $A_3$ | 12.83 | 4.98 | 8.27 | 8.69 | 3.94 | 11.35 | (12.60) | 3.83 | 0.86 | 12.25 | 0.25 | accepted |
| $A_4$ | 27.97 | 10.74 | 19.88 | 19.53 | 8.62 | 27.82 | (23.20) | 7.12 | 3.91 | 25.66 | 0.25 | accepted |
| $A_5$ | 1.43 | 1.15 | 1.38 | 1.32 | 0.15 | 1.29 | 1.35 | 1.38 | 1.34 | 0.05 | 0.86 | accepted |
| $A_6$ | 0.34 | 0.82 | 1.54 | 0.90 | 0.60 | 1.49 | 1.05 | 0.87 | 1.14 | 0.32 | 0.70 | accepted |
| $A_7$ | 4.02 | 4.02 | 4.06 | 4.03 | 0.02 | 4.39 | 4.00 | 4.34 | 4.24 | 0.21 | 0.22 | accepted |
| $A_8$ | 103.20 | 126.30 | | 114.75 | 16.33 | 116.90 | 153.90 | 112.40 | 127.73 | 22.77 | 0.21 | accepted |
| $A_9$ | 12.08 | 12.56 | 11.02 | 11.89 | 0.79 | 12.31 | 11.32 | 10.17 | 11.27 | 1.07 | 0.29 | accepted |
| $A_{10}$ | 43.73 | 88.28 | 51.82 | 61.28 | 23.73 | 37.31 | 0.00 | 0.00 | 12.44 | 21.54 | 0.18 | accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

There is no significant impact on all Accounting ratios in this above case.

| Table 5.49Group2: Case-D:Plethico Pre and Post M&A Accounting Ratios | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ratios | Pre- M&A | | | | | Post- M&A | | | | | | |
| | years | | | Mean | Std | years | | | Mean | Std | P-value | $H_0$ |
| | 2005 | 2006 | 2007 | | | 2008 | 2009 | 2010 | | | | |
| $A_1$ | 31.08 | 26.80 | 29.90 | 29.26 | 2.21 | 15.21 | 20.25 | 22.47 | 19.31 | 3.72 | 0.08 | accepted |
| $A_2$ | 28.85 | 24.81 | 28.77 | 27.48 | 2.31 | 13.49 | 18.92 | 20.75 | 17.72 | 3.78 | 0.08 | accepted |
| $A_3$ | 25.16 | 24.13 | 28.57 | 25.95 | 2.32 | 13.51 | 17.29 | 15.93 | 15.58 | 1.91 | 0.03 | rejected |
| $A_4$ | 21.39 | 20.18 | 27.20 | 22.92 | 3.75 | 16.88 | 24.51 | 22.87 | 21.42 | 4.02 | 0.66 | accepted |
| $A_5$ | 1.47 | 2.88 | 3.88 | 2.74 | 1.21 | 2.20 | 3.72 | 3.58 | 3.17 | 0.84 | 0.36 | accepted |
| $A_6$ | 0.26 | 0.21 | 0.65 | 0.37 | 0.24 | 0.93 | 0.69 | 0.54 | 0.72 | 0.20 | 0.28 | accepted |
| $A_7$ | 27.19 | 15.40 | 50.63 | 31.07 | 17.93 | 8.45 | 10.33 | 10.83 | 9.87 | 1.25 | 0.17 | accepted |
| $A_8$ | 172.17 | 290.46 | 363.83 | 275.49 | 96.70 | 237.38 | 196.68 | 184.11 | 206.06 | 27.85 | 0.44 | accepted |
| $A_9$ | 3.10 | 2.75 | 3.86 | 3.24 | 0.57 | 13.93 | 14.18 | 11.20 | 13.10 | 1.65 | 0.02 | rejected |
| $A_{10}$ | 3.86 | 10.95 | 6.29 | 7.03 | 3.60 | 8.07 | 4.57 | 4.05 | 5.56 | 2.19 | 0.68 | accepted |

Source of Data: www.moneycontrol.com. BSESENSEX

The Net profit Margin and Selling and Distribution cost affected by M&A in this case.

| Table 5.50 Group2: Case-E:Shilpa Medicare Pre and Post Accounting Ratios | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ratios | Pre- M&A | | | | | Post- M&A | | | | | | |
| | years | | | Mean | Std | years | | | Mean | Std | P-value | $H_0$ |
| | Mar '04 | Mar '05 | Mar '06 | | | Mar '08 | Mar '09 | Mar '10 | | | | |
| $A_1$ | 13.41 | 14.60 | 16.35 | 14.79 | 1.48 | 20.82 | 27.68 | 33.23 | 27.24 | 6.22 | 0.05 | rejected |
| $A_2$ | 12.55 | 13.93 | 15.83 | 14.10 | 1.65 | 17.20 | 23.26 | 29.08 | 23.18 | 5.94 | 0.07 | accepted |
| $A_3$ | 6.96 | 8.54 | 8.13 | 7.88 | 0.82 | 11.66 | 5.42 | 19.54 | 12.21 | 7.08 | 0.41 | accepted |
| $A_4$ | 26.69 | 26.99 | 11.32 | 21.67 | 8.96 | 20.82 | 10.93 | 41.01 | 24.25 | 15.33 | 0.87 | accepted |
| $A_5$ | 0.90 | 0.79 | 2.31 | 1.33 | 0.85 | 1.71 | 1.21 | 1.05 | 1.32 | 0.34 | 0.99 | accepted |
| $A_6$ | 0.27 | 0.35 | 0.06 | 0.23 | 0.15 | 1.39 | 1.43 | 0.61 | 1.14 | 0.46 | 0.04 | rejected |
| $A_7$ | 5.57 | 5.97 | 4.05 | 5.20 | 1.01 | 5.01 | 6.11 | 5.56 | 5.56 | 0.55 | 0.61 | accepted |
| $A_8$ | 27.41 | 3.70 | 152.21 | 61.11 | 79.78 | 181.88 | 99.25 | 71.16 | 117.43 | 57.56 | 0.51 | accepted |
| $A_9$ | 4.64 | 3.80 | 3.09 | 3.84 | 0.78 | 2.81 | 2.25 | 2.36 | 2.47 | 0.30 | 0.05 | accepted |
| $A_{10}$ | 18.05 | 13.72 | 15.00 | 15.59 | 2.22 | 8.75 | 17.37 | 3.92 | 10.01 | 6.81 | 0.35 | accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

The M&A has significant impact on Operating Profit Margin & Debt Equity Ratio in the above Case.

| Table 5.51Group2: Case-F:Markansas Pharma pre and Post M&A Accounting Ratios | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ratios | Pre- M&A | | | | | Post- M&A | | | | | | |
| | years | | | Mean | Std | years | | | Mean | Std | P-value | $H_0$ |
| | Mar '05 | Mar '06 | Mar '07 | | | Mar '08 | Mar '09 | Mar '10 | | | | |
| $A_1$ | 17.39 | 15.24 | 6.77 | 13.13 | 5.61 | 12.59 | 8.26 | 11.26 | 10.70 | 2.22 | 0.56 | accepted |
| $A_2$ | 14.56 | 12.47 | 3.61 | 10.21 | 5.81 | 8.99 | 3.95 | 6.93 | 6.62 | 2.53 | 0.42 | accepted |
| $A_3$ | 8.30 | 7.76 | 2.80 | 6.29 | 3.03 | 5.84 | (2.29) | (2.79) | 0.25 | 4.84 | 0.11 | accepted |
| $A_4$ | 23.72 | 21.96 | 6.11 | 17.26 | 9.70 | 12.11 | (6.12) | (6.81) | (0.27) | 10.73 | 0.08 | accepted |
| $A_5$ | 1.25 | 3.81 | 2.50 | 2.52 | 1.28 | 1.44 | 1.23 | 0.93 | 1.20 | 0.26 | 0.24 | accepted |
| $A_6$ | 1.16 | 2.99 | 2.94 | 2.36 | 1.04 | 2.74 | 3.00 | 2.96 | 2.90 | 0.14 | 0.41 | accepted |
| $A_7$ | 4.82 | 3.77 | 1.95 | 3.51 | 1.45 | 1.89 | 3.03 | 3.44 | 2.79 | 0.80 | 0.63 | accepted |
| $A_8$ | 129.20 | 368.50 | 471.40 | 323.03 | 175.57 | 291.40 | 168.29 | 185.40 | 215.03 | 66.69 | 0.51 | accepted |
| $A_9$ | 2.73 | 3.27 | 4.66 | 3.55 | 1.00 | 6.36 | 4.11 | 2.36 | 4.28 | 2.01 | 0.71 | accepted |
| $A_{10}$ | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | |

Source of Data: www.moneycontrol.com, BSESENSEX

There is no significant impact of M&A on the Accounting Ratio Investigated in the above case.

| Table 5.52Group3: Case-A:Dabur Pharma Pre and Post M&A Accounting Ratios | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ratios | Pre- M&A | | | | | Post- M&A | | | | | | |
| | years | | | Mean | Std | years | | | Mean | Std | P-value | $H_0$ |
| | 2005 | 2006 | 2007 | | | 2009 | 2010 | 2011 | | | | |
| $A_1$ | 11.01 | 11.11 | 9.29 | 10.47 | 1.02 | (26.11) | 7.24 | 19.67 | 0.27 | 23.67 | 0.54 | accepted |
| $A_2$ | 8.57 | 8.87 | 6.97 | 8.14 | 1.02 | (35.13) | 0.70 | 13.15 | (7.09) | 25.07 | 0.41 | accepted |
| $A_3$ | 8.90 | 6.24 | 6.06 | 7.07 | 1.59 | (44.54) | (6.80) | 3.03 | (16.10) | 25.11 | 0.27 | accepted |
| $A_4$ | 9.47 | 5.47 | 6.15 | 7.03 | 2.14 | (51.94) | (13.44) | 6.06 | (19.77) | 29.51 | 0.28 | accepted |
| $A_5$ | 0.57 | 0.52 | 0.33 | 0.47 | 0.13 | 0.60 | 0.99 | 1.15 | 0.91 | 0.28 | 0.19 | accepted |
| $A_6$ | 0.58 | 0.62 | 0.82 | 0.67 | 0.13 | 1.54 | 2.32 | 2.56 | 2.14 | 0.53 | 0.03 | rejected |
| $A_7$ | 4.22 | 4.72 | 5.24 | 4.73 | 0.51 | 2.48 | 2.15 | 2.22 | 2.28 | 0.17 | 0.02 | rejected |
| $A_8$ | 99.69 | 168.53 | 92.31 | 120.18 | 42.04 | 257.04 | 218.95 | 221.68 | 232.56 | 21.25 | 0.07 | accepted |
| $A_9$ | 20.95 | 13.69 | 10.28 | 14.97 | 5.45 | 8.23 | 4.92 | 4.32 | 5.82 | 2.11 | 0.04 | rejected |
| $A_{10}$ | 7.91 | 21.87 | | 14.89 | 9.87 | 37.31 | 0.00 | 0.00 | 12.44 | 21.54 | 0.91 | accepted |

Source of Data: www.moneycontrol.com, BSESENSEX

The Debt-Equity Ratio, Inventory Turnover Ratio & Selling & Distribution Cost Composition have experienced a significant impact of M&A in this case.

| Table 5.53 Group3: Case-B:Matrix Laboratories Pre and Post Accounting Ratios | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ratios | Pre- M&A | | | | | Post- M&A | | | | | | |
| | years | | | Mean | Std | years | | | Mean | Std | P-value | $H_0$ |
| | 2003 | 2004 | 2005 | | | 2007 | 2008 | 2009 | | | | |
| $A_1$ | 33.60 | 32.25 | 27.91 | 31.25 | 2.97 | 14.10 | 16.32 | 21.29 | 17.24 | 3.68 | 0.07 | accepted |
| $A_2$ | 27.17 | 29.26 | 27.87 | 28.10 | 1.06 | 12.69 | 13.22 | 18.89 | 14.93 | 3.44 | 0.03 | rejected |
| $A_3$ | 18.80 | 23.18 | 19.95 | 20.64 | 2.27 | 13.60 | (31.16) | 12.60 | (1.65) | 25.56 | 0.30 | accepted |
| $A_4$ | 73.90 | 69.93 | 20.88 | 54.90 | 29.53 | 10.18 | (43.88) | 21.73 | (3.99) | 35.03 | 0.22 | accepted |
| $A_5$ | 1.18 | 0.76 | 1.16 | 1.03 | 0.24 | 0.75 | 0.64 | 0.73 | 0.71 | 0.06 | 0.09 | accepted |
| $A_6$ | 1.32 | 1.17 | 0.07 | 0.85 | 0.68 | 0.23 | 0.65 | 0.75 | 0.54 | 0.28 | 0.61 | accepted |
| $A_7$ | 5.70 | 4.30 | 3.82 | 4.61 | 0.98 | 3.49 | 3.31 | 4.15 | 3.65 | 0.44 | 0.32 | accepted |
| $A_8$ | 70.36 | 77.83 | 77.92 | 75.37 | 4.34 | 112.23 | 116.77 | 128.88 | 119.29 | 8.61 | 0.01 | rejected |
| $A_9$ | 8.03 | 4.80 | 3.47 | 5.43 | 2.35 | 2.43 | 2.32 | 3.03 | 2.59 | 0.38 | 0.20 | accepted |
| $A_{10}$ | 14.03 | 3.71 | 15.72 | 11.15 | 6.50 | | | | | | | |

Source: www.moneycontrol.com, BSE SENSEX

The impact on Gross Profit Margin & Selling &Distribution Cost Composition is statistically significant.

| Table 5.54 Group3: Case-C:Rainbaxy pre-and Post M&A Accounting Ratios | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ratios | Pre- M&A | | | | | Post- M&A | | | | | | |
| | years | | | Mean | Std | years | | | Mean | Std | P-value | $H_0$ |
| | 2005 | 2006 | 2007 | | | 2009 | 2010 | 2011 | | | | |
| $A_1$ | 5.23 | 14.30 | 11.15 | 10.23 | 4.60 | 9.55 | 22.35 | 13.77 | 15.22 | 6.52 | 0.09 | accepted |
| $A_2$ | 3.03 | 11.86 | 8.56 | 7.82 | 4.46 | 6.03 | 18.31 | 10.25 | 11.53 | 6.24 | 0.12 | accepted |
| $A_3$ | 4.98 | 8.27 | 11.35 | 8.20 | 3.19 | 3.83 | 19.74 | (38.04) | (4.82) | 29.85 | 0.56 | accepted |
| $A_4$ | 8.92 | 16.19 | 24.34 | 16.48 | 7.71 | 44.14 | 22.41 | (158.61) | (30.69) | 111.32 | 0.56 | accepted |
| $A_5$ | 1.15 | 1.38 | 1.29 | 1.27 | 0.12 | 1.38 | 1.40 | 0.76 | 1.18 | 0.36 | 0.72 | accepted |
| $A_6$ | 0.82 | 1.54 | 1.49 | 1.28 | 0.40 | 0.87 | 0.83 | 2.02 | 1.24 | 0.68 | 0.92 | accepted |
| $A_7$ | 4.02 | 4.06 | 4.39 | 4.16 | 0.20 | 4.34 | 3.95 | 4.71 | 4.33 | 0.38 | 0.34 | accepted |
| $A_8$ | 126.29 | 134.28 | 116.90 | 125.82 | 8.70 | 112.42 | 220.31 | 2.08 | 111.60 | 109.12 | 0.83 | accepted |
| $A_9$ | 12.56 | 11.02 | 12.31 | 11.96 | 0.83 | 10.17 | 7.42 | 2.08 | 6.56 | 4.11 | 0.16 | accepted |
| $A_{10}$ | 88.28 | 51.82 | 37.31 | 59.14 | 26.26 | 0.00 | 8.54 | -- | 4.27 | 6.04 | 0.21 | accepted |

Source: www.moneycontrol.com, BSE SENSEX

There is no significant Impact of M&A on Accounting Ratios in this case.

**Table 5.55Group3: Case-D: Orchid Pre and Post M&A Accounting Ratios Performance**

| Ratios | Pre- M&A | | | | | Post- M&A | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | years | | | | | years | | | | | | |
| | Mar '06 | Mar '07 | Mar '08 | Mean | Std | Mar '10 | Mar '11 | Mar '12 | Mean | Std | P-value | $H_0$ |
| $A_1$ | 25.17 | 27.97 | 30.02 | 27.72 | 2.43 | (8.85) | 19.78 | 20.49 | 10.47 | 16.74 | 0.18 | accepted |
| $A_2$ | 15.28 | 19.51 | 22.14 | 18.98 | 3.46 | (21.12) | 12.05 | 11.91 | 0.95 | 19.11 | 0.19 | accepted |
| $A_3$ | 9.47 | 10.56 | 14.88 | 11.64 | 2.86 | 26.48 | 9.55 | 5.75 | 13.93 | 11.04 | 0.79 | accepted |
| $A_4$ | 10.56 | 19.28 | 26.81 | 18.88 | 8.13 | 33.22 | 14.06 | 8.99 | 18.76 | 12.78 | 0.99 | accepted |
| $A_5$ | 0.94 | 0.91 | 0.76 | 0.87 | 0.10 | 0.74 | 0.84 | 1.41 | 1.00 | 0.36 | 0.68 | accepted |
| $A_6$ | 1.31 | 3.26 | 2.84 | 2.47 | 1.03 | 1.63 | 1.63 | 1.49 | 1.58 | 0.08 | 0.28 | accepted |
| $A_7$ | 2.12 | 1.52 | 2.16 | 1.93 | 0.36 | 3.42 | 3.17 | 2.81 | 3.13 | 0.31 | 0.05 | accepted |
| $A_8$ | 238.67 | 197.06 | 144.59 | 193.44 | 47.14 | 166.94 | 139.08 | 88.67 | 131.56 | 39.67 | 0.01 | rejected |
| $A_9$ | 3.79 | 4.27 | 3.67 | 3.91 | 0.32 | 3.42 | 2.82 | -- | 3.12 | 0.42 | 0.34 | accepted |
| $A_{10}$ | 30.38 | 35.60 | 18.62 | 28.20 | 8.70 | 31.25 | 18.63 | 24.10 | 24.66 | 6.33 | 0.66 | accepted |

Source: www.moneycontrol.com, BSE SENSEX

The Number of Days in Working Capital has statistically significant impact of M&A in this case.

## Section E: Jensen Measure Analysis

**Table 5.56 Post M&A Long term Financial Market Based performance**

| Group | Case | Covar( $R_i$,$R_m$) | VAR($R_m$) | Slope | Jensen Measure | Result |
|---|---|---|---|---|---|---|
| 1 | **B** | (14.980) | 64.520 | (0.230) | 1.200 | **Significant Positive** |
| | **C** | 77.654 | 97.603 | 0.796 | (1.673) | Negative |
| | **D** | 68.587 | 48.549 | 1.413 | 1.778 | **Significant positive** |
| 2 | **A** | (32.456) | 192.406 | (0.169) | 0.978 | **positive** |
| | **B** | 26.399 | 104.330 | 0.253 | (0.395) | Negative |
| | **C** | 116.293 | 98.661 | 1.179 | 0.763 | **Positive** |
| | **D** | 113.360 | 93.589 | 1.211 | (0.299) | Negative |
| | **E** | 128.418 | 106.402 | 1.207 | (2.142) | Negative |
| | **F** | 142.345 | 91.767 | 1.551 | 1.066 | **Significant Positive** |
| 3 | **A** | (44.640) | 97.600 | (0.450) | (0.140) | Negative |
| | **B** | 148.770 | 101.471 | 1.466 | 0.162 | **Positive** |
| | **C** | 118.458 | 79.088 | 1.498 | 0.276 | **Positive** |
| | **D** | 48.128 | 30.266 | 1.590 | 0.219 | **Positive** |

Source of Data: www.moneycontrol.com. BSESENSEX

### Conclusion

The survey of experts followed by the confirmation through brief analysis of cases have shown that the motives and intentions of the acquirers/targets at the time of deals are not different from the generic motives and intentions for undertaking M&A found in literature review .However, the post M&A value capturing and value creation have mixed result.

The next chapter would be devoted to analyze the comparative findings of all methodologies adopted and also the findings of present study will be compared to others similar research findings in order to conform the results of current study.

# Chapter-6

## Research Findings, Suggestion, Limitation and Further Research Scope

The motives of M&A strategy adopted by Indian Pharmaceutical Firms are not much different from the key consideration identified on the basis of opinion given by experts. These findings give the strength to the argument that the M&A undertaken by the Indian Pharmaceutical Firms are strategic in nature and the motives ranges from fast growth and expansion to corporate cultural improvement along with brand and knowledge base development. Most of the cases of M&A undertaken by Indian Pharmaceutical Firms focusing on core area which is helpful in realization of expected synergistic benefits in long term period.

The findings of the current study is similar to the findings of the study conducted by Vidhisha Vyas, Krishnan Narayanan, A. Ramanathan (2012) according to them the M&As in Pharmaceutical Industry of India are strategic in nature. According to Srinivasan and Mishra (2007) the motives of M&A involving at least one Indian firm, retain or gain market leadership and market entry.

Reddy and Arun (2008) using market model to analyze the impact on shareholders' wealth of Merger of RIL-RPL for en event window of 41 days (-20, ..0...+20). Their study shows that there is no significant abnormal returns occurred to the shareholders of the of the acquiring company, RIL.

The research finding is partially confirm the past study conducted by B Rajesh Kumar and S Panneerselvam(2009) they found that there are positive abnormal gains for the firms involved in M&A in the immediate period surrounding the M&A announcement. The average announcement day excess returns were highest for target firms involved in merger. Similar to their findings the target firms ( Group3 Firms) had statistically significant cumulative abnormal in the event windows( -10,2), (-10,10) in two cases.

The study found that all ratios are not shown statistical significant difference in any of the case simultaneously rather in each case different ratios are to be found significant difference between pre and post M&A period

The findings of current study on post M&A accounting performance is partially similar to the findings of past studies conducted in Indian context. The empirical findings of past research conducted to examine the post M&A accounting performance shows the mixed results. The studies which find significant improvement in financial performance based on accounting information (e.g., Ramakrishna, 2008; Reddy & Padma, 2005;Gangadhar & Reddy,2007; Mann & Kohli, 2008; Selvem, Vanitha, & Babu, 2005), many other studies find no significant change in the financial performance based on accounting information (e.g; Kumar & Rajib,2007b ; Mallikarjunappa, 2007;Dash, 2005; Bagchi & Banerjee, 2005; Gourlay, Ravishankar, & Weyman-Jones, 2006; Mantravadi & Reddy, 2007;; Tambi, 2007; Pawaskar, 2001; Beena, 2000).

The Summary of findings of Event Study, Accounting Ratios and Jensen Measure is given in the table below –

Table 6.1

| Group | Case | Event | Accounting Ratio | Jensen Measures |
|---|---|---|---|---|
| 1 | A | NA | Gross Profit Margin | Significant Positive |
| | B | No cumulative Abnormal Return | Inventory Turn Over ,No of Days in working Capital | Significant Positive |
| | C | No cumulative Abnormal Return | Return on Networth ,Debt to Equity Ratio | Negative |
| | D | (-10,10),(-10,2) | Debt Equity Ratio | Significant Positive |
| 2 | A | (-10,2),(-2,2)(-1,1) | no impact | Positive |
| | B | (-1,1) | Inventory Turn Over | insignificant Negative |
| | C | No cumulative Abnormal Return | no impact | Positive |
| | D | NA | Net Profit Margin | insignificant Negative |
| | E | (-2,2) | Operating Profit Margin,Debt To Equity Ratio | Significant Negative |
| | F | (-10,2) | no impact | Significant Positive |
| 3 | A | (-10,2) | Debt-Equity Ratio ,Inventory Turnover Ratio & Selling & Distribution Cost Composition | Negative |
| | B | No cumulative Abnormal Return | Gross Profit Margin, Selling &Distribution Cost Composition | Positive |
| | C | (-10,10),(-10,2) | no impact | Positive |
| | D | No cumulative Abnormal Return | Number of Days in Working Capital | Positive |

Source: own

The result of above findings of the cases of M&A took in Indian Pharmaceutical Industry investigated in this study clearly shows that the value is created in the long term period. The findings of the study is in conformity with the basic tenets of M&A which is, M&A is undertaken for long term growth though in most of the cases no or negative value creation found in short post M&A period. We also found that the long term value creation is positive in the group 1 companies and group 3 companies this also shows that in the cases where Indian Companies Acquire the Foreign Companies The Indian companies could not get much benefits in the form of value creation on the other hand in case of Domestic Companies acquisition and the cases where domestics companies acquired by foreign companies the value has been created.

**Suggestion**

The integrative approach adopted in this study is in conformity of the views of many researchers that being a complex issue the M&A research should be conducted in an integrative perspective. Therefore, the approach adopted in the this study is a unique attempt to integrate all possible tools of analysis of M&A in order to arrive at scientific result. This approach should be adopted in order to analyze the post M&A performance of the cases of other industry in future.

**The limitations of study may be summarized as-**

- Getting primary data on all the relevant variables related to M&A from corporate organization is near impossibility because they do not want to reveal or share their strategic important information .Therefore, most of the data e,g Balance Sheet and information about possible synergy creation and motives are mainly through secondary data available in public domain e.g,Money Control .com ,Google Finance, Hindu Business etc.
- Because the related to relevant variables is not available directly from the corporate records, therefore, the corporate Executives, Consultant, Academic researchers are requested to rate the variables on certain scale. So the data available on the variables is in the form

of expert opinion but it is not equal to the primary data available with corporate consultants and executives used by them to assess the deal of M&A.

- All relevant mentioned in this study are basically generic in nature .However the actual incidence of all these variables would vary from case to case .The purpose of the study was to generate the common list of such generic variables. However it cannot be said from particular list that these variables are true reflection of what really happens in corporate practices .This is because from the secondary data only a generic list can be generated and the verified from the expert in the absence of actual information on the real corporate M&A practices.
- All the variables are related to each other and one another in some way or the other .However whether the relationship of casual or functional in nature that cannot be ascertained. As of now as suggested by Jeminson&Sitkin(1986) Since all the variables are relevant of M&A must considered concurrently that at a time.
- The M&A cases of pharmaceutical Firms have been taken from different time period having different macroeconomic and other legal impact which have been ignored
- Due to unavailability of real data about the actual intention of the managers at the time of undertaking M&A the researcher has to rely upon the secondary source of data available in the form media reports which may in some cases lead to wrong conclusion

**Further Research**

- This accepted by all researchers world over that the M&A is multidimensional & multistage phenomenon starting from the prospecting, due-diligence, negotiation, pricing and post M&A performance evaluation with different motives for different deals.
- To ascertain the actual nature of the interaction between and among the variables further casual research on various dimension will be required

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